SOUTHERN PACIFIC COMPANY

PACIFIC LINES

TIME TABLE

FOR THE

TUCSON DIVISION

113

To Take Effect Sunday, March 8, 1942, at 12:01 A. M.

MOUNTAIN STANDARD TIME

For the government and information of employes only.

L. B. McDONALD,
General Manager

C. F. DONNATIN,
Assistant General Manager

W. B. KIRKLAND,
Superintendent of Transportation

H. R. HUGHES,
Superintendent

WELLTON SUBDIVISION

EASTWARD

WESTWARD

Time Table No. 113

March 8, 1942

Capacity of sidings in car lengths	SECOND CLASS				FIRST CLASS					Distance from San Francisco		STATIONS		Distance from Phoenix Yard	FIRST CLASS				SECOND CLASS	THIRD CLASS
	846 Freight	902 Freight	844 Freight	842 Freight	2 Sunset Limited	4 Golden State Limited	370 A. O. N.	44 Californian	6 Argonaut						1 Sunset Limited	3 Golden State Limited	43 Californian	5 Argonaut	841 Freight	901 Freight
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily Ex. Sun. & Mon.	Leave Daily	Leave Daily						Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily
Yuma Yd. BKWOTYP	4.50PM	1.30PM	8.20AM	1.15AM	5.55PM	4.30AM	4.20AM	4.05AM	3.45AM	732.7	A. B. S.	TO-R YUMA	D. T.	174.2	s 9.55AM	s 1.20PM	s 12.50AM	s 1.20AM	1.40AM	11.45PM
P	5.05	1.45	8.35	1.30	6.05	4.40	4.30	4.15	3.55	737.4 737.5		4.7 EAST YARD	D. T.	169.5	9.45	1.10	12.40	1.10	1.27	11.32
62 P	5.10	1.50	8.40	1.35	6.08	4.43	4.33	4.18	3.59	740.1		2.6 ARABY		166.9	9.41	1.06	12.36	1.05	1.22	11.27
70 P	5.16	1.56	8.46	1.41	6.12	4.47	4.37	4.22	4.03	743.7		3.6 FORTUNA		163.3	9.36	1.01	12.31	1.00	1.16	11.21
62 P	5.21	2.01	8.51	1.46	6.15	4.50	4.40	4.25	4.06	746.6		2.9 BLAISDELL		160.4	9.32	12.56	12.26	12.55	1.11	11.16
M 81 P	5.34	2.14	9.04	1.59	6.27	5.02	4.52	4.37	f 4.18	753.5		6.9 DOME	D. T.	153.5	9.20	12.44	f 12.14AM	12.43	12.58	11.03
P										760.2		6.7 LIGURTA	D. T.	146.8						
68 WIP	6.05PM	2.55	9.35AM	2.30AM	f 6.49	5.24	5.13	4.58	s 4.40AM	770.0		9.8 TO WELLTON	D. T.	137.0	9.00AM	12.23	11.53PM	f 12.20	12.30AM	10.35
72 P		3.07			6.57	5.32	5.20	5.05		775.7		5.7 MING		131.3		12.15	11.45	12.11		10.20
73 P		3.17			7.05	5.40	5.27	5.12		780.9		5.2 ROLL		126.1		12.08PM	11.38	f 12.04AM		10.05
31 Spur P										788.3		7.4 TYSON		118.7						
73 P		3.37			7.18	5.53	5.40	5.25		793.2		4.9 GROWLER		113.8		11.55AM	11.25	11.51PM		9.45
76 P		3.55			7.28	6.03	5.50	5.35		802.5		9.3 KOFA		104.5		11.45	11.15	11.41		9.31
73 P		4.15			7.39	6.14	6.01	5.46		812.7		10.2 HORN		94.3		11.34	11.04	11.30		9.13
75 WOP		4.40			f 7.52	6.27	6.12	5.59		822.3		9.6 TO HYDER		84.7		f 11.24	10.54	f 11.20		8.55
73 P		5.00			8.04	6.39	6.22	6.10		831.1		8.8 MONTEZUMA		75.9		11.11	10.43	11.08		8.32
76 WP		5.20			**8.15**	6.50	6.33	6.21		841.1		10.0 SADDLE		65.9		11.00	10.32	10.57		**8.15**
72 P		6.15			8.29	7.04	6.47	6.35		851.0		9.9 GILLESPIE		56.0		10.48	10.20	10.45		7.40
39 Spur P										856.0		5.0 CRAG		51.0						
76 P		6.35			8.40	7.15	6.58	6.46		861.3		5.3 ARLINGTON		45.7		10.37	10.09	10.34		7.15
72 P		**6.50**			8.45	7.20	7.03	6.51		865.7		4.4 DIXIE		41.3		10.32	10.04	f 10.29		**6.50**
72 P		7.00			8.51	7.26	7.09	6.57		871.5		5.8 CONGER		35.5		10.26	9.58	10.23		6.38
76 P		7.10			f 8.59	7.34	7.14	7.03		875.7		4.2 TO BUCKEYE		31.3		f 10.18	9.50	s 10.15		6.30
72 P		7.22			9.06	7.41	7.20	7.10		881.7		6.0 LIBERTY		25.3		10.09	9.40	10.02		6.18
74 YP		7.34			f 9.17	7.52	7.29	7.19		889.7		8.0 LITCHFIELD		17.3		10.00	9.30	f 9.52		6.05
100 P		7.40			**9.22**	7.56	7.33	7.23		893.0		3.3 CASHION		14.0		9.56	**9.22**	f 9.44		5.59
P										895.7		2.7 TOLLESON		11.3		f				
73 P		7.52			**9.33**	8.05	7.40	7.30		898.1		2.4 FOWLER		8.9		9.48	9.09	**9.33**		5.48
Phoenix Yard P										902.0		3.9 CAMPO		5.0						
75 P		8.05			9.42	8.13	7.46	7.38		904.0		2.0 23rd AVE. PHOENIX		3.0		9.42	9.02	9.22		5.35
										905.5		1.5 CROSSING-AT&SF WYE		1.5						
BKWP					s 9.50PM	s 8.20AM	Via Freight Lead	s 7.45AM		906.0		0.5 R PHOENIX	D. T.	1.0		9.35AM	8.55PM	9.15PM		
BKWOTYP		8.20PM					7.55AM			907.0		1.0 TO-R PHOENIX YARD	D. T.	0.0						5.20PM
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily Ex. Sun. & Mon.	Arrive Daily	Arrive Daily			(174.2)			Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily
	(1.15) 29.84	(6.50) 25.49	(1.15) 29.84	(1.15) 29.84	(3.55) 44.25	(3.50) 45.21	(3.35) 48.61	(3.40) 47.26	(0.55) 40.69			..........Time over District.......... ....Average Speed per Hour..........			(0.55) 40.69	(3.45) 46.21	(3.55) 44.25	(4.05) 42.42	(1.10) 31.97	(6.25) 27.16

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
44-4	Any Station	Discharge		Yuma
44-4	Wellton, Hyder, Buckeye, Litchfield	Receive	Phoenix	

ADDITIONAL STATIONS

Granite Spur	MP 755.2
Yano	MP 777.7
Harqua	MP 849.4
Hassayampa	MP 867.6
Palo Verde	MP 870.2
Norton	MP 884.9

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
43	Any Station	Discharge Revenue		East of El Paso
43	Buckeye	Receive Discharge	Colton	El Paso
43	Buckeye	Receive Revenue	San Diego	
43	Blaisdell	Receive Discharge	Colton	Tucson
5	Any Station	Discharge		Phx. Line St'ns & El Paso

PICACHO SUBDIVISION

Time Table No. 113

March 8, 1942

	EASTWARD													WESTWARD						
	SECOND CLASS				FIRST CLASS									FIRST CLASS					SECOND CLASS	THIRD CLASS
Capacity of sidings in car lengths	904	856	854	852	2	30	4	370	44	6	Distance from San Francisco	STATIONS	Distance from Tucson	1	3	29	43	5	843	903
	Freight	Freight	Freight	Freight	Sunset Limited	Arizona Limited	Golden State Limited	A. O. N.	Californian	Argonaut				Sunset Limited	Golden State Limited	Arizona Limited	Californian	Argonaut	Freight	Freight
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily Ex. Sun., Mon.	Leave Daily	Leave Daily				Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily
Phoenix Yard BKWP					10.05PM	6.00PM	8.35AM		8.00AM		906.0	R PHOENIX D.T.	120.9		s 9.15AM	s 11.25AM	s 8.40PM	s 9.00PM		
BKWO TYP	9.30PM				10.08	6.03	8.38	8.08AM	8.03		907.0	1.0 TO-R PHOENIX YARD	119.9		9.10	11.22	8.35	8.55		11.55PM
20 Spur P	9.42				10.15		8.45	8.16	8.10		911.1	4.1 KENDALL	115.8		9.02		8.27	8.47		11.40
19 Spur P											911.8	0.7 TOVREA	115.1							
79 YP	9.52				f 10.22	6.15	f **8.52**	8.23	8.17		914.4	2.6 TO TEMPE	112.5		f **8.52**	11.09	s 8.21	s 8.41		11.25
P											915.3	0.9 TEMPE JCT.	111.6							
P	10.02				10.28		8.58	8.29	8.23		917.1	1.8 NORMAL JCT.	109.8		8.46		8.13	8.34		11.10
Yard Limits 75 WYP	**10.15**				s **10.38**	6.27	s 9.08	**8.38**	**8.33**		921.8	4.7 TO MESA	105.1		**8.38** s **8.33**	10.56	s 8.05	s 8.26		**10.45** **10.15**
81 P	10.22				10.42		9.12	8.42	8.37		923.6	1.8 McQUEEN	103.3		8.27		7.59	8.19		9.45
22 P											925.4	1.8 TREMAINE	101.5							
40 P	10.27				10.47		9.15	8.48	8.42		926.1	0.7 FALFA	100.8		8.23		7.55	8.15		9.33
80 P	10.36				f 10.54	6.40	s 9.22	8.54	8.49		929.3	3.2 TO CHANDLER	97.6		f 8.18	10.40	7.50	s 8.10		9.25
43 Spur P											931.0	1.7 POZO	95.9							
76 P	10.45				11.01		9.29	9.01	8.56		934.3	3.3 SERAPE	92.6		8.10	10.33	7.40	8.02		9.17
67 P	10.56				11.06		9.34	9.08	9.01		939.0	4.7 SANTAN	87.9		8.05		7.35	7.57		9.09
67 P	11.05				11.11	6.56	9.39	9.13	9.06		943.2	4.2 DOOK	83.7		8.00	10.23	7.30	7.52		9.02
14 Spur P											948.1	4.9 OLBERG	78.8							
75 P	**11.22**				**11.22**	7.07	9.50	9.24	9.17		953.2	5.1 BLACKWATER	73.7		7.49	10.12	7.19	7.40		8.46
118 YP	11.33				11.27	**7.12**	9.55	9.29	9.22		958.2	5.0 POSTON	68.7		7.44		**7.12**	7.35		8.38
73 WP	11.52PM				f 11.35	7.16	s **10.03**	9.43	9.32		962.0	3.8 A. B. S. TO COOLIDGE	64.9		s 7.39	**10.03**	7.05	s 7.30		8.30
32 P						**7.21**		**9.58**			966.4	4.4 RANDOLPH	60.5			**9.58**		f **7.21**		
67 P	12.10AM				11.47		10.18	10.04	**9.53**		971.4	5.0 TOPAZ	55.5		7.28	**9.53**	6.54	7.13		8.11
P											975.2	3.8 PEAK	51.7							
94 E89 WOYP	12.28	7.40PM	10.45AM	3.25AM	11.59PM	7.36	10.32	10.16	10.03	9.10AM	979.7 936.7	4.5 TO PICACHO	47.2	4.45AM	7.18	9.43	6.43	f 7.02	4.30PM	7.57
72 P	12.38	**7.50**	10.55	3.35	12.05AM		10.38	10.21	10.08	9.17	940.7	4.0 OCATILLA	43.2	4.41	7.13		6.38	6.56	4.23	**7.50**
90 P	12.47	7.59	11.04	3.44	12.09	**7.43**	10.42	10.25	10.12	9.23	944.2	3.5 WYMOLA	39.7	4.37	7.09	9.35	6.34	6.52	4.17	**7.43**
71 P	12.55	8.07	11.11	3.51	12.13		10.46	10.29	10.16	**9.31**	947.9	3.7 MONTROSE	36.0	4.33	7.05	**9.31**	6.30	6.48	4.11	7.36
W78 E78 WP	1.04	8.16	11.18	3.58	12.18	7.50	10.51	10.33	10.20	f 9.39	951.4	3.5 TO RED ROCK	32.5	4.29	7.01	9.27	6.26	f 6.44	4.05	7.30
67 P	1.09	8.21	11.23	4.03	12.21		10.54	10.36	10.23	9.43	954.3	2.9 AVRA	29.6	4.26	6.58		6.23	6.39	4.00	7.25
78 P	1.16	8.28	11.30	4.10	12.25	7.57	10.59	10.40	10.27	9.48	958.4	4.1 NAVISKA	25.5	4.21	6.53	9.20	6.18	6.34	3.53	7.18
69 P	1.22	8.34	11.36	**4.16**	12.29		11.04	10.44	10.31	f 9.54	962.2	3.8 MARANA	21.7	**4.16**	6.49		6.14	f 6.29	3.47	7.12
94 P	1.27	8.39	11.41	4.21	12.32		11.07	10.47	10.34	9.58	964.6	2.4 ROSKRUGE	19.3	4.13	6.46		6.11	6.24	3.43	7.08
164 WP	1.32	8.44	11.46	4.26	12.35	8.05	11.10	10.50	10.37	10.02	966.9	2.3 RILLITO	17.0	4.10	6.43	9.12	6.08	f 6.21	3.39	7.04
93 P	1.38	8.50	11.52	4.32	12.39		11.14	10.53	10.40	10.07	969.9	3.0 SABINO	14.0	4.07	6.40		6.05	6.16	3.34	6.59
78 P	1.43	8.55	11.57AM	4.37	12.42	8.10	11.17	10.56	10.43	f 10.13	972.1	2.2 CORTARO	11.8	4.04	6.37	9.07	6.02	f 6.13	3.30	6.55
93 P	1.48	9.00	12.02PM	4.42	12.45		11.20	10.59	10.46	10.17	974.7	2.6 KINO	9.2	4.00	6.34		5.59	6.09	3.26	6.51
W78 E78 P	1.53	9.05	12.07	4.47	12.48		11.23	11.02	10.49	10.22	977.4	2.7 JAYNES	6.5	3.57	6.31		5.56	6.06	3.21	6.46
P	1.59	9.11	12.13	4.53	12.52	8.19	11.27	11.06	10.53	10.27	981.2	3.8 STOCKHAM D.T.	2.7	3.53	6.27	8.58	5.52	6.02	3.14	6.39
Tucson Yard BKWFITYP	2.10AM	9.25PM	12.25PM	5.05AM	s 1.00AM	s 8.25PM	s 11.35AM	11.15AM	s 11.00AM	s 10.35AM	983.9	2.7 TO-R TUCSON	0.0	3.45AM	6.20AM	8.52AM	5.45PM	5.55PM	3.05PM	6.30PM
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily Ex. Sun., Mon.	Arrive Daily	Arrive Daily		(120.9)		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily
	(4.40) 25.69	(1.45) 26.97	(1.40) 28.32	(1.40) 28.32	(2.55) 41.45	(2.25) 50.03	(3.00) 40.30	(3.07) 38.47	(3.00) 40.30	(1.25) 33.32		Time over District Average Speed per Hour		(1.00) 47.20	(2.55) 41.45	(2.33) 47.41	(2.55) 41.45	(3.05) 39.21	(1.25) 33.32	(5.25) 22.13

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except No. 30 is superior to all westward trains and Nos. 4, 44 and 370 are superior to No. 1.

RULES 86, 87 and 93. Second and inferior class trains, extra trains and engines must clear the time of No. 29 and No. 30 not less than ten minutes.

Inferior trains must be clear of main track and insulated joints at meeting and passing points for No. 29 and No. 30.

RULE 206 (A). Unless otherwise instructed, crews arriving Phoenix on eastward first-class trains, will assume same schedule at Phoenix and these trains and No. 30 proceed to Phoenix Yard without clearance.

RULE 221. Trains terminating at Phoenix need not obtain clearance at Phoenix Yard.

Second main track between east end Phoenix Yard and east switch Kendall, may be used by freight trains when authorized by train order. Single track rules apply.

RULE 5. At Picacho schedule time and train orders apply at junction switch.

No. 44 reduce speed sufficiently, stopping if necessary to permit exchange of first class and working mail at Tempe, Mesa, Chandler and Coolidge.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
6	Rillito, Jaynes	Receive Discharge Revenue	Any Station	Any Station
44	Any Station	Discharge		Yuma
44	Tempe, Mesa Chandler, Coolidge	Receive	East of El Paso	
4	Any Station	Discharge		Ph'x Line Stn's
30	Chandler	Receive	Kansas City	

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
1	Any Station Tucson to Picacho inc., except Jaynes, Rillito	Receive	Gila Line Stations	
1	Jaynes, Rillito	Receive Revenue	Any Station	
29	Chandler	Discharge		Kansas City
43	Any Station	Discharge Revenue		East of El Paso
43	Coolidge, Chandler	Receive Revenue	San Diego	
5	Any Station	Receive Discharge	Phoenix Line Stations	El Paso

WELLTON SUBDIVISION

Capacity of sidings in car lengths	EASTWARD SECOND CLASS			EASTWARD FIRST CLASS	Distance from San Francisco		Time Table No. 113 March 8, 1942		Distance from Gila	WESTWARD FIRST CLASS	WESTWARD SECOND CLASS
	846 Freight	844 Freight	842 Freight	6 Argonaut			STATIONS			1 Sunset Limited	841 Freight
	Leave Daily	Leave Daily	Leave Daily	Leave Daily						Arrive Daily	Arrive Daily
68 WIP	6.05 PM	9.35 AM	2.30 AM	4.40 AM	770.0	TO	WELLTON	D.T.	85.7	f 9.00 AM	12.30 AM
							3.1				
69 P	6.13	9.43	2.38	4.46	773.1		ASHER		82.6	8.54	12.22
							3.3				
63 P	6.19	9.49	2.44	f 4.50	776.4		TAONA		79.3	f 8.49	12.16
							3.7				
69 P	6.25	9.55	2.50	4.55	780.1		GAEL		75.6	8.44	12.09
							3.7				
63 P	6.31	10.01	2.56	5.00	783.8		COLFRED		71.9	8.39	12.02 AM
							4.8				
67 P	6.39	10.09	3.04	5.06	788.6		PEMBROKE		67.1	8.33	11.54 PM
							4.0				
W79 E67 P	6.50	10.20	3.15	f 5.13	792.6	TO	MOHAWK		63.1	f 8.28	11.47
							3.3				
63 P	6.56	10.26	3.21	5.18	795.9		KIM		59.8	8.20	11.37
							4.6				
64 P	7.04	10.34	3.29	5.24	800.5		STOVAL		55.2	8.14	11.29
							5.7				
94 P	7.14	10.44	3.39	f 5.31	806.2		MUSINA		49.5	f 8.07	11.20
							5.7				
63 WP	7.24	10.54	3.49	f 5.40	811.9	A.B.S.	AZTEC		43.8	f 7.59	11.09
							3.9				
94 P	7.30	11.00	3.55	5.45	815.8		MUGGINS		39.9	7.53	10.54
							3.9				
63 P	7.37	11.07	4.02	5.49	819.7		STANWIX		36.0	7.49	10.47
							2.3				
68 P	7.41	11.11	4.06	5.52	822.0		LAVA		33.7	7.46	10.43
							4.1				
W76 E72 WOP	8.05	11.35	4.30	f 6.04	826.1	TO	SENTINEL		29.6	s 7.40	10.35
							3.5				
76 P	8.15	11.45	4.40	6.09	829.6		TRIGO		26.1	7.30	10.29
							3.5				
61 P	8.22	11.52 AM	4.47	6.14	833.1		TARTRON		22.6	7.26	10.23
							6.8				
65 P	8.33	12.03 PM	4.58	6 23	839.9		PIEDRA		15.8	7.17	10.12
							5.6				
64 P	8.42	12.12	5.07	f 6.30	845.5		THEBA		10.2	f 7.10	10.03
							4.8				
63 P	8.50	12.20	5.15	6.36	850.3		SMURR		5.4	7.04	9.55
							5.4				
Yard Limits BKWOTYP	9.00 PM	12.30 PM	5.25 AM	s 6.45 AM	855.7	TO-R	GILA		0.0	6.55 AM	9.45 PM
							(85.7)				
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily						Leave Daily	Leave Daily
	(2.55) 29.38	(2.55) 29.38	(2.55) 29.38	(2.05) 41.14			Time over District Average Speed per Hour			(2.05) 41.14	(2.45) 31.16

WELLTON SUBDIVISION

Capacity of sidings in car lengths	EAST-WARD	Distance from San Francisco	Time Table No. 113 March 8, 1942 Litchfield Branch	Distance from Litchfield Park	WEST-WARD
			STATIONS		
74 YP		889.7	LITCHFIELD	5.0	
			5.0		
30 16 17 Spurs		894.7	LITCHFIELD PARK	0.0	
			(5.0)		

RULE 5. At Gila schedule time and train orders for first class trains apply at passenger station.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS				
Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
1	Piedra	Receive Revenue	Any Station	
6	Piedra	Receive Discharge Revenue	Any Station	Any Station

YUMA VALLEY RAILROAD

Capacity of sidings in car lengths	EAST-WARD	Distance from Yuma		Time Table No. 113 March 8, 1942	Distance from Gadsden	WEST-WARD
				STATIONS		
Yuma Yard P		0.0	R	YUMA	21.0	
				1.0		
20		1.0		U.S.R.S.	20.0	
				2.0		
25 Spur		3.0		LUDY	18.0	
				5.5		
23		8.5		WILLETTS	12.5	
				1.7		
8 Spur		10.2		SPILLWAY	10.8	
				4.8		
25		15.0		SOMERTON	6.0	
				6.0		
		21.0		GADSDEN	0.0	
				(21.0)		

SPECIAL INSTRUCTIONS

Southern Pacific Company Rules and Regulations of the Transportation Department, Air Brake Rules, and Special Instructions in Tucson Division Time Table govern on Yuma Valley Railroad.

Trains will not exceed speed 15 MPH except must not exceed 8 MPH over trestle at U.S.R.S.

Impaired side clearance at Spillway Spur, MP 10.25.

At Yuma, normal position of junction switch will be for S.P. yard tracks.

RULE 93: Yard limits are established at Yuma.

U.S.R.S. yard, Yuma, and Ludy siding must not be used.

Track out service and must not be used east of MP 16 (Somerton).

PICACHO SUBDIVISION

EASTWARD — WESTWARD

Capacity of sidings in car lengths	SECOND CLASS			FIRST CLASS		Distance from San Francisco	A.B.S.	Time Table No. 113 March 8, 1942	Distance from Picacho	FIRST CLASS		SECOND CLASS
	856 Freight	854 Freight	852 Freight		6 Argonaut			STATIONS		1 Sunset Limited		843 Freight
	Leave Daily	Leave Daily	Leave Daily		Leave Daily					Arrive Daily		Arrive Daily
Yard Limits BKWOTYP	4.30PM	7.40AM	12.20AM		6.55AM	855.7	TO-R	GILA 3.4	81.8	s 6.45AM		7.15PM
62 P	4.39	7.49	12.29		7.02	859.1		COLEDON 6.0	78.4	6.38		7.05
74 P	4.55	8.05	12.45		7.12	865.1		BOSQUE 4.0	72.4	6.30		6.54
62 P	5.07	8.17	12.57		7.19	869.1		COCAPOS 2.7	68.4	6.24		6.46
73 P	5.17	8.27	1.07		7.24	871.8		SHAWMUT 2.8	65.7	6.20		6.41
72 YP	5.30	8.40	1.20		f 7.30	874.6	TO	ESTRELLA 4.8	62.9	f 6.16		6.36
64 P	5.39	8.49	1.29		7.36	879.4		BUCHAN 4.3	58.1	6.09		6.27
63 P	5.47	8.57	1.37		f 7.43	883.7		MOBILE 4.7	53.8	f 6.03		6.19
62 P	5.55	9.05	1.45		7.50	888.4		ENID 4.4	49.1	5.56		6.11
63 P	**6.03**	9.13	1.53		7.55	892.8		HEATON 5.0	44.7	5.50		**6.03**
146 WP	6.25	9.35	2.15		f 8.05	897.8	TO	MARICOPA 5.1	39.7	s 5.43		5.50
61 P	6.35	9.45	2.25		8.13	902.9		LIRIM 4.8	34.6	5.31		5.27
70 P	6.45	9.53	2.33		8.20	907.7		BON 4.8	29.8	5.26		5.19
63 P	6.55	10.01	2.41		8.27	912.5		NUNEZ 6.3	25.0	5.21		5.11
Yard Limits 88 WP	7.07	10.12	2.52		s 8.40	918.8	TO	CASA GRANDE 2.2	18.7	s 5.13		5.01
13 Spur						921.0		SECO 2.7	16.5			
61 P	7.16	10.21	3.01		8.47	923.7		ARIZOLA 4.7	13.8	5.05		4.53
63 P	7.24	10.29	3.09		8.54	928.4		TOLTEC 4.7	9.1	4.59		4.45
74 P	7.32	10.37	3.17		f 9.03	933.1		ELOY 4.4	4.4	f 4.52		4.37
94 WOYP E89	7.40PM	10.45AM	3.25AM		f 9.10AM	937.5	TO	PICACHO	0.0	4.45AM		4.30PM
	Arrive Daily	Arrive Daily	Arrive Daily		Arrive Daily			81.8		Leave Daily		Leave Daily
	(3.10) 25.83	(3.05) 26.53	(3.05) 26.53		(2.15) 36.36			..........Time over district.......... ....Average speed per hour..........		(2.00) 40.90		(2.45) 29.68

PICACHO SUBDIVISION

EASTWARD — WESTWARD

Capacity of sidings in car lengths			Distance from San Francisco		Time Table No. 113 March 8, 1942 Christmas Branch	Distance from Christmas		
					STATIONS			
81 P			923.6		McQUEEN 3.4	86.9		
72 P			927.0	TO	GILBERT 5.0	83.5		
26			932.0		HIGLEY 3.6	78.5		
9			935.6		GERMANN 2.5	74.9		
18 P			938.1		RITTENHOUSE 3.5	72.4		
54 P			941.6		QUEEN CREEK 8.2	68.9		
45 P			949.8		MAGMA 9.2	60.7		
27 WP			959.0	TO	FLORENCE 9.3	51.5		
6 Spur			968.8		DIVERSION 0.7	42.2		
26 P			969.0		PRICE 6.2	41.5		
26 P			975.2		COCHRAN 7.9	35.3		
23 P			983.1		ZELLWEGER 1.5	27.4		
5 Spur			984.6		WOOLEY 3.2	25.9		
Yd. Limits P			987.8	TO-R	RAY JUNCTION 7.1	22.7		
29			994.9		BRANAMAN 4.3	15.6		
Yard Limits Y			999.2		BURNS WYE 0.5	11.3		
28			999.7		BURNS 0.5	10.8		
BWOP			1000.2	TO-R	HAYDEN JCT. 1.9	10.3		
14 KP			1002.1	TO	HAYDEN 1.4	8.4		
8 Spur			1003.5		WINKELMAN 1.2	7.0		
			1004.7		ROCK QUARRY 2.3	5.8		
			1007.0		FINNEY 2.4	3.5		
2 Spur			1009.4		RUDO 1.1	1.1		
41			1010.5		CHRISTMAS	0.0		
					(86.9)			

PICACHO SUBDIVISION

EASTWARD — WESTWARD

Capacity of sidings in car lengths					Distance from San Francisco		Time Table No. 113 March 8, 1942 Creamery Branch	Distance from Normal Jct.				
							STATIONS					
79 YP					914.4	TO	TEMPE 1.0	2.1				
75} 13} Spurs					915.4		CREAMERY 1.1	1.1				
					916.5		NORMAL JCT.	0.0				
							(2.1)					

PICACHO SUBDIVISION

EASTWARD — WESTWARD

Capacity of sidings in car lengths					Distance from San Francisco		Time Table No. 113 March 8, 1942 Tempe Branch	Distance from West Chandler				
							STATIONS					
P					915.8		TEMPE JCT. 2.4	7.7				
20					917.7		PETERSON 2.4	5.3				
48					920.1		HELENA 2.9	2.9				
					923.0		WEST CHANDLER	0.0				
							(7.7)					

ADDITIONAL STATIONS

Barr M.P. 961.8

RULE 5. At Gila schedule time and train orders for first class trains apply at passenger station.

At Picacho schedule time and train orders apply at junction switch.

At Hayden Jct. when train-order office is open, signal governs movement of trains and engines between Christmas Branch junction switch (1584 feet east of Hayden Jct.) and Hayden Jct. train-order office. Movements between these points are authorized by signal being placed in proceed position after being called for by one long, one short and one long sound of whistle. When train-order office is closed, movements may be made between these points "With Caution" if intervening track is seen to be clear.

Normal position Christmas Branch junction switch is for Kennecott Copper Corporation Railroad. Westward trains and engines via Kennecott Copper Corporation Railroad, and via Christmas Branch, must stop to clear Christmas Branch junction switch before proceeding as authorized above.

RULE 99 must be complied with between Christmas Branch junction switch and Ray Consolidated derail on Kennecott Copper Corporation Railroad.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
1	Toltec, Bon, Bosque	Receive Revenue	Any Station	
6	Bosque, Bon, Toltec	Receive Discharge Revenue	Any Station	Any Station

EASTWARD PICACHO SUBDIVISION WESTWARD

Capacity of sidings in car lengths		SECOND CLASS	FIRST CLASS	Distance from San Francisco		Time Table No. 113		Distance from Nogales	FIRST CLASS	THIRD CLASS
		870	378			March 8, 1942			379	871
		Freight	Mexican Express			Nogales Branch			Mexican Express	Freight
		Lv. Tuesday, Friday	Leave Daily Ex. Sunday			STATIONS			Arrive Daily Ex. Sunday	Arrive Tues., Friday
Tucson Yard	BKWFTYP	6.00 AM	11.40 AM	983.9	TO-R	TUCSON	TO-R TUCSON	65.9	s 4.35 PM	5.40 PM
							0.8			
						VIA SHOP YARD	T. & N. R. R. JCT.	65.1		
						2.6	2.2			
	P	6.15	11.50 AM	986.5 986.9		SOUTH LINE CROSSING	SOUTH LINE CROSSING	62.9	4.25	5.24
						6.9				
55	P	6.35	12.02 PM	993.8		XAVIER		56.0	4.13	5.07
						8.6				
62	P	7.00	f 12.17	1002.4		SAHUARITA		47.4	f 3.58	4.45
						8.0				
12 Spur	P		f	1010.4		CONTINENTAL		39.4	f	
						1.7				
18 Spur	P			1012.1		MORALES		37.7		
						4.2				
56	P	7.40	12.41	1016.3		CANOA		33.5	3.34	4.10
						4.8				
57	P	7.55	s 12.51	1021.1	TO	AMADO		28.7	s 3.25	3.57
						4.5				
56	P	8.05	12.59	1025.6		CHAVEZ		24.2	3.16	3.42
						2.5				
			f	1028.1		SOTOS CROSSING		21.7	f	
						6.1				
57	P	8.30	f 1.14	1034.2		OTERO		15.6	f 3.01	3.20
						5.9				
89 Spur	P	8.50	1.24	1040.1		CALABASAS		9.7	2.51	3.05
						9.7				
Nogales Yard	BKWFTP	9.30 AM	s 1.45 PM	1049.8	TO-R	NOGALES		0.0	2.30 PM	2.40 PM
		Arrive Tues., Friday	Arrive Daily Ex. Sunday			(65.9)			Leave Daily Ex. Sunday	Leave Tues., Friday
		(3.30) 18.83	(2.05) 31.44			Time over District Average Speed per Hour			(2.05) 31.44	(3.00) 21.97

Rule S-72 Exception, No. 378 is superior to No. 379.

Passenger trains use shop yard route, Tucson yard.
Freight trains use T. & N. R. R. Jct. route, Tucson yard.

EASTWARD BOWIE SUBDIVISION WESTWARD

Capacity of sidings in car lengths		SECOND CLASS	FIRST CLASS	Distance from San Francisco		Time Table No. 113	Distance from Live Oak	FIRST CLASS	SECOND CLASS
		884	382			March 8, 1942		381	883
		Local Freight	Motor			Globe Branch		Motor	Local Freight
		Leave Daily Ex. Monday	Leave Daily			STATIONS		Arrive Daily	Arrive Daily Ex. Sunday
Yard Limits	BKWFYP	8.00 AM	3.05 PM	1098.4 1097.9	TO-R	BOWIE	136.4	s 1.00 PM	4.55 PM
						9.5			
50	P	8.25	3.22	1107.4		ESCALA	126.9	12.36	4.33
						10.4			
13	P	8.50	f 3.38	1117.8		TANQUE	116.5	f 12.17	4.07
						7.3			
42	P	9.05	**3.49**	1125.1		HAECKEL	109.2	12.04 PM	**3.49**
						7.5			
38	P	9.25	s 4.02	1132.6	TO	SOLOMON	101.7	s 11.52 AM	3.18
						2.7			
21 Spur				1135.3		LONE STAR	99.0		
						2.2			
Yard Limits 52	WP	10.20	s 4.15	1137.5	TO	SAFFORD	96.8	s 11.40	2.40
						3.1			
34	P	10.35	s 4.25	1140.6		THATCHER	93.7	s 11.28	1.15
						2.5			
				1143.1		CENTRAL	91.2		
						2.5			
28	P	10.55	s 4.36	1145.6	TO	PIMA	88.7	s 11.18	1.00
						1.1			
62	P	**11.14**	4.40	1146.7		DUBLIN	87.6	**11.14**	12.50
						2.2			
				1148.9		GLENBAR	85.4		
						4.1			
59	P	11.45 AM	f 4.51	1153.0		CORK	81.3	f 11.04	12.30
						1.8			
				1154.8		ASHURST	79.5		
						4.5			
59	P	**12.10 PM**	s 5.04	1159.3	TO	FT. THOMAS	75.0	s 10.53	**12.10 PM**
						4.9			
17	WP	12.25	f 5.13	1164.2		GERONIMO	70.1	f 10.43	11.50 AM
						5.9			
54	P	12.40	f 5.24	1170.1		BYLAS	64.2	f 10.31	11.35
						6.7			
52	P	12.57	f 5.36	1176.8		CALVA	57.5	f 10.19	11.20
						6.9			
53	P	1.15	5.48	1183.7		NACHES	50.6	10.07	11.05
						7.3			
52	P	1.40	6.04	1191.0		DILI	43.3	9.51	10.40
						6.3			
	P		f	1197.3 1197.2		PERIDOT	37.0	f	
						3.8			
52	WP	2.10	s 6.25	1201.0	TO	SAN CARLOS	33.2	s 9.30	10.10
						6.8			
20 Spur	P			1207.8		REPPY	26.4		
						5.7			
43	P	2.50	f 6.52	1213.5		CUTTER	20.7	f 9.06	9.40
						5.8			
Yd. Limits 20	P	3.10	7.08	1219.3		PINAL	14.9	8.54	9.23
						2.2			
	BKWOTP	3.20 PM	s 7.15 PM	1221.5	TO-R	GLOBE	12.7	8.45 AM	9.10 AM
						4.7			
13	P			1226.2		RADIUM	8.0		
						1.1			
3 Spur				1227.3		BURCH	6.9		
						2.9			
Yard Limits 9 Spur				1230.2		CLAYPOOL	4.0		
						1.7			
	WYP			1231.9	TO-R	MIAMI	2.3		
						1.1			
27				1233.0		INSPIRATION JCT.	1.2		
						1.2			
14				1234.2		LIVE OAK	0.0		
		Arrive Daily Ex. Monday	Arrive Daily			(136.4)		Leave Daily	Leave Daily Ex. Sunday
		(7.20) 16.87	(4.10) 29.69			Time over District Average Speed per Hour		(4.15) 29.11	(7.45) 15.96

EASTWARD

BOWIE SUBDIVISION

WESTWARD

Time Table No. 113

March 8, 1942

Capacity of sidings in car lengths	SECOND CLASS 866 Freight Leave Daily	964 Freight Leave Daily	864 Freight Leave Daily	962 Freight Leave Daily	862 Freight Leave Daily	960 Freight Leave Daily	FIRST CLASS 30 Arizona Limited Leave Daily	4 Golden State Limited Leave Daily	44 Californian Leave Daily	6 Argonaut Leave Daily	2 Sunset Limited Leave Daily	Distance from San Francisco		STATIONS		Distance from Lordsburg	FIRST CLASS 43 Californian Arrive Daily	1 Sunset Limited Arrive Daily	SECOND CLASS 845 Freight Arrive Daily
Tucson Yard BKW FTYP	5.45 PM	4.05 PM	8.40 AM	7.45 AM	1.45 AM	12.01 AM	8.33 PM	11.50 AM	11.15 AM	11.05 AM	1.20 AM	983.9	TO-R	TUCSON	Track No. 2				
												984.7		0.8 T. & N. R. R. JCT.					
Tucson Yard 4 Spur	5.58	4.20	8.53	8.00	1.58	12.15	8.41	11.59 AM	11.24	11.14	1.30	987.7		3.0 POLVO					
13 Spur P												990.7		3.0 WILMOT			See Rio Grande Division Time Table.		
63 P	6.13	4.40	9.08	8.20	2.13	12.35	8.48	12.10 PM	11.34	11.25	1.41	993.8		3.1 RANKIN					
P										f		998.6		4.8 ESMOND					
63 P	6.35	5.05	9.30	8.45	2.35	1.00	8.59	12.26	11.50 AM	f 11.41	1.57	1003.3		4.7 VAIL					
79 WP	6.57	5.40	9.52	9.20	2.57	1.35	9.15	12.43	12.07 PM	f 11.59 AM	2.14	1012.6		9.3 PANTANO					
N94 S85 CIYP	7.30	6.20 PM	10.25	10.01 AM	3.30	2.15 AM	9.33 PM	1.02 PM	12.27 PM	f 12.20 PM	2.33	1023.6	TO-R	11.0 MESCAL		124.7	f 4.30 PM	2.30 AM	2.20 PM
77 P	7.40		10.35		3.40					12.27	2.40	1028.2		4.6 CHAMISO		120.1	4.20	2.20	2.05
E118 Yd. Lmts. W70 KWOP	8.00		10.57		4.00					s 12.41	s 2.55	1032.6 1032.5	TO	4.3 BENSON		115.7	s 4.08	s 2.07	1.42
62 P	8.12		11.09		4.12					12.48	3.02	1035.8		3.2 FENNER		112.5	3.57	1.57	1.33
83 P	8.23		11.20		4.23					12.55	3.08	1038.5		2.7 CURVO		109.8	3.51	1.51	1.26
75 WP	8.34		11.32		4.34					1.04	3.15	1041.0		2.5 SIBYL		107.8	f 3.45	1.45	1.18
63 P	8.43		11.41		4.43					**1.10**	3.21	1043.9		2.9 TULLY		104.4	3.41	1.41	**1.10**
63 P	8.52		11.50		4.52					1.17	3.27	1047.3		3.4 OCHOA		101.0	3.35	1.35	12.57
65 P	9.01		11.59 AM		5.01					1.23	3.33	1050.8		3.5 LANCHA		97.5	3.29	1.29	12.48
E 65 W65 YP	9.14		12.12 PM		5.14					s 1.31	3.38	1053.9	TO	3.1 DRAGOON		94.4	s 3.24	1.25	12.40
81 P	9.24		**12.22**		5.24					1.37	3.44	1058.3		4.4 MANZORO		90.0	3.15	1.17	**12.22**
90 P	9.33		12.32		5.33					s 1.46	3.50	1063.9	TO	5.6 COCHISE		84.4	f 3.06	1.09	12.09 PM
64 P	9.42		12.41		5.42					1.53	3.56	1069.6		5.7 HADO		78.7	2.57	1.01	11.57 AM
68 WP	9.51		12.50		5.51					s 2.04	4.02	1074.7	TO	5.1 WILLCOX	A. B. S	73.6	s 2.50	12.55	11.48
61 P	10.01		1.00		6.01					2.11	4.07	1079.4		4.7 DRURY		68.9	2.39	12.48	11.39
99 P	10.13		1.12		6.13					f 2.17	4.12	1082.6		3.2 RASO		65.7	f 2.35	12.44	11.33
64 P	10.22		1.21		6.22					**2.25**	4.18	1087.7		5.1 ALRICH		60.6	**2.25**	12.35	11.18
64 P	10.28		1.27		6.28					2.30	4.22	1091.0		3.3 LUZENA		57.3	2.15	12.28	11.08
63 P	10.34		1.33		6.34					2.35	4.26	1094.5		3.5 CHOLLA		53.8	2.08	12.23	11.01
Yard Limits BKWFYP	10.55		**1.53**		6.55					s 2.53	s 4.37	1098.4	TO-R	3.9 BOWIE		49.9	s 2.00 1.48	s 12.15	10.51
64 P	11.04		2.01		7.04					3.00	4.43	1102.6		4.2 HOLT		45.7	1.41	12.01 AM	10.37
63 P	11.11		2.08		7.11					f 3.05	4.47	1106.6		4.0 OLGA		41.7	f 1.36	11.56 PM	10.31
63 P	11.18		2.14		7.18					3.10	4.51	1110.2		3.6 KARRO		38.1	1.31	11.51	10.25
63 BKWFYP	11.25		2.20		7.25					s 3.17	4.55	1114.2	TO	4.0 SAN SIMON		34.1	s 1.26	11.46	10.19
64 P	**11.42**		2.34		7.39					3.22	4.59	1117.6		3.4 BAWTRY		30.7	1.20	**11.42**	10.13
74 P	11.54 PM		2.46		7.51					3.29	5.05	1121.8		4.2 VANAR		26.5	1.15	11.37	10.06
70 P	12.04 AM		2.55		8.00					3.36	5.11	1125.0		3.2 CAVOT		23.3	1.10	11.32	10.00
E66 W69 YP	12.25		3.15		8.20					f 3.49	5.21	1128.9	TO	3.9 STEINS		19.4	f 1.02	11.24	9.50
62 P	12.32		3.22		8.27					3.55	5.26	1132.7		3.8 MONDEL		15.6	12.55	11.17	9.36
63 P	12.39		3.29		8.34					4.00	5.31	1136.5		3.8 CONRAD		11.8	12.50	11.12	9.29
62 P	12.47		3.37		8.42					f 4.06	5.37	1140.8		4.3 GARY		7.5	f 12.44	11.06	9.21
63 P	12.54		3.44		8.49					4.11	5.41	1143.9		3.1 PYRA		4.4	12.39	11.02	9.15
Yard Limits BKWFTYP	1.05 AM		3.55 PM		9.00 AM					s 4.18 PM	s 5.48 AM	1148.3	TO-R	4.4 LORDSBURG		0.0	12.32 PM	10.55 PM	9.05 AM
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily			(164.4)			Leave Daily	Leave Daily	Leave Daily
	(7.20) 22.42	(2.15) 17.65	(7.15) 22.68	(2.16) 17.51	(7.15) 22.68	(2.14) 17.77	(1.00) 39.70	(1.12) 33.08	(1.12) 33.08	(5.13) 31.51	(4.28) 36.81			Time over District Average Speed per Hour			(3.58) 31.44	(3.35) 34.80	(5.15) 23.76

RULES 86, 87 and 93. Second and inferior class trains, extra trains and engines must clear the time of No. 30 not less than ten minutes.

Inferior trains must be clear of main track and insulated joints at passing points for No. 30.

Westward trains will use track No. 1, Rio Grande Division, Mescal to Tucson, and eastward trains will use track No. 2, Tucson Division, Tucson to Mescal, unless otherwise directed by train order.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS				
Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
1	Any Station	Discharge		East of El Paso
2	Willcox	Discharge		Phoenix Line Stations
6	Sibyl	Rec. Dis. (Rev.)	Any Station	Any Station
4	Mescal	Receive Discharge	Any Station	Any Station

SPECIAL INSTRUCTIONS

RULE 2. Watch Inspectors:

S. A. Pope, Manager of Time Service	65 Market St., San Francisco
Yuma	Wm. Baird
Yuma	J. H. Huber
Phoenix	H. H. Howard
Winkelman	J. C. Williams, Sr.
Tucson	Greenwald & Adams
Tucson	H. L. Tucker
Nogales	E. M. Mather
Lordsburg	H. H. Conder
Globe	J. G. Cubitto
Miami	J. G. Cubitto, Jr.

RULES 10 (G) and 10 (H). On tracks No. 1 and No. 2 between Tucson and Polvo, signals will be placed on left of track in direction of movement.

RULE 14. Other engine whistle signals:
For diverging route, 0 ——— 0.
For siding, ——— 0 ———.

RULE 14 (d). As specified below, ——— ——— ——— ——— 0 sounds of whistle will be indication that flagman may return from west as prescribed by Rule 99:

Phoenix Yard—Kendall, Trains on Second Main Track.
Normal Jct., Trains on Creamery Branch.
Picacho, Trains on Phoenix Line.

RULE 14 (e). As specified below, ——— ——— ——— ——— ——— ——— sounds of whistle will be indication that flagman may return from east as prescribed by Rule 99:

Wellton, Trains on Phoenix Line.
Litchfield, Trains on Litchfield Branch.
Kendall—Phoenix Yard, Trains on Second Main Track.
Tempe, Trains on Creamery Branch.
Tempe Jct., Trains on Tempe Branch.
McQueen, Trains on Christmas Branch.
T. & N. R. R. Jct., Trains on Nogales Branch.
Mescal, Trains on Rio Grande Division.
Bowie, Trains on Globe Branch.

RULE 14 (k). Also sound signal when passing rear of train, to be acknowledged by trainmen by signal 12 (c).

RULE 14 (l). When sounding warning signal 14 (l) approaching grade crossings, Arizona State law requires that steam whistle be used if engine is so equipped.

RULE 17. Mars Signal Light on engines shall be used when engine is moving at night, and in foggy or stormy weather. It must be dimmed or extinguished approaching passenger stations, and at other points as prescribed by rules. For identification purposes must be dimmed.

RULE 17 (C). For identification purposes, headlights may be dimmed when passing the head end and rear end of trains on adjoining tracks, except when nearing street or highway crossings.

RULE 21 (C). At Phoenix, Gila and Tucson, incoming engines may display indicators until arrival at roundhouse.

RULE 28. In double track territory signals will be placed to right of track according to direction of movement of train to be flagged. Trains in opposite direction will not be required to observe signals so placed.

RULES 72 and 73. Second class and extra trains may move irrespective of time table superiority Phoenix to Phoenix Yard when moving with the current of traffic.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except as shown on Pages 3 and 6.

RULE 83. Identification of trains may be made on double track between Yuma and East Yard; Dome and Wellton; Stockham and Tucson; Phoenix and Phoenix Yard; to be applied at end of double track; and on second main track between Phoenix Yard and Kendall, to be applied at Kendall. Trains approaching each other between these stations must reduce speed sufficiently to permit identification and Rule 14 (k) will apply.

RULE 83 (A). At the following stations, only the trains indicated will register.

Phoenix—First class trains.
Mescal—All trains.
Bowie—All trains.

RULE 83 (B). At open train order offices trains may register by ticket as follows:

Phoenix Yard	First class trains
Mescal	All trains
Bowie	All trains except on Globe Branch

Tucson—Engineers of light engines from east will leave register ticket with engine dispatcher for delivery to operator for registration.

RULE 83 (E). A train may check the register against an extra when authorized by train order in the following form: "...may check register at......against Extra......on order No. ....". A train so authorized to check the register must also register.

An extra when instructed by train order in the following form: "Extra ......register at......on order No. ...." will register, and place this order number and date in column captioned "Signals."

RULE 93. Second and third paragraphs of Rule 93 apply to all tracks within yard limits.

Yard limits in which the provisions of Rule 93 will apply are established at the following points:

	West	East
Yuma	MP 731.50	MP 737.80
Phoenix	MP 900.96	MP 908.79
Mesa	MP 920.45	MP 923.23
Ray Jct.	MP 986.84	MP 988.72
Hayden Jct.	MP 998.80	MP 1004.90
Gila	MP 854.20	MP 857.70
Casa Grande	MP 917.00	MP 920.33
Tucson	MP 981.96	MP 989.00 (Track 2) MP 988.09 (Track 1) MP 987.42 (Nog. Br.) MP 990.37 (So. Line)
Nogales	MP 1046.37	MP 1049.89
Benson	MP 1031.60	MP 1034.01
Bowie	MP 1097.10	MP 1100.00
Bowie—Globe Branch		MP 1099.50
Lordsburg	MP 1147.19	MP 1151.38
Safford	MP 1136.65	MP 1138.34
Globe	MP 1218.70	MP 1223.22
Miami	MP 1229.82	MP 1234.20

Comply with third paragraph Rule 93 within portions of main track not protected by automatic block signals which are located and described as follows:

Phoenix—Union Station and main track, between "Block System Limit" sign opposite dwarf signal 9059 and "Block System Limit" sign at MP 906.2 on westward main track and dwarf signal 9064 on eastward main track.

Tucson—Passenger tracks Nos. 1, 2 and 3. Eastward between "End of block" sign at MP 983.6 and dwarf light Signal 9838. Westward between "End of block" sign opposite dwarf light Signal 9838 and home Signal 9835.

RULE 97. Extra trains must not run via Creamery Branch unless train order so specifies.

RULE D-97 (A). Will apply between Phoenix and Phoenix Yard.

RULE 98. At South Line Crossing.—Gate equipped with red signal, normal position across South Line track. Before changing position of gate and making movement on South Line track, protect in each direction on Nogales Branch as per Rule 99.

RULE 99. When roadway machines (ditchers, pile drivers, power shovels, crane and derrick cars) are operated on double track or on tracks immediately adjacent to the main track, or off track adjacent to main tracks, boom or other parts of the machine must not be operated to foul main track, without proper flag protection. Such equipment must be at rest and clear of main tracks when trains are passing.

Flag protection must be provided on adjacent main tracks which closely parallel track on which ballast or other material is being loaded or unloaded. Operations must be stopped when trains on main track are passing.

In territory where head free rail is laid, unless torpedoes with spring clamps are used, duplicate torpedoes must be placed on the opposite rail so as to afford maximum protection.

Head free rail is rail on which the square corners on under side of head are beveled up to about 60 degrees slope to within approximately one-half inch of top of rail.

RULE 103 (A). A flagman must precede all movements over:

Yuma, 1st, 2nd, 3rd and 4th Sts.
Tovrea, Washington St.
Tempe (Creamery Branch), Mill Ave. and 8th St.
Tucson, West Congress St.
Nogales, Court and Park Sts.
Globe, Hackney St. and eastward over Murphy St.
Miami, Latham Blvd. and Adonis Ave.

In general, highway crossing signals are so designed that they will not operate for trains or engines making a reverse movement after having passed over the crossing. Trains or engines making such reverse movements must protect the crossing unless it is known that signals are operating.

RULE 103 (B). Back-up hose must be used when making back-up movements with cars, between Hayden Jct. and Hayden Mills, and between North and South yards and/or P. F. E. yard, Tucson.

RULE 104. NORMAL POSITION OF SWITCHES AT THE END OF DOUBLE TRACK AND AT JUNCTIONS:

East Yard	Spring switch end double track, for trains entering the double track.
Dome	Spring switch at end of double track, for trains entering double track.
Phoenix	Spring switch at west end freight lead and main track, for main track. West end of double track, for westward main track.
Phoenix Yard	Spring switch at east end double track, for trains entering the double track.
Picacho	Operators will handle switches near train-order office for movements to and from Phoenix Line and both sidings.
Stockham	Spring switch end double track, for trains entering the double track.

DERAILS IN MAIN TRACK:

Litchfield Park, 320 feet west of east end of track.
Christmas, 250 feet east of west switch.
Nogales, 221 feet west of west switch, may be trailed through by eastward trains.
South Line Crossing, 165 feet east on South Line.

RULE 105. FOLLOWING TRACKS ARE DESIGNATED FOR USE AS SIDINGS:

Fowler	Track north of main track.
Mesa	Track south of main track.
Ray Junction	Track south of main track.
Mohawk	First track north of main track, for eastward trains. Second track north of main track, for westward trains.
Sentinel	Track north of main track, for westward trains. Track south of main track, for eastward trains.
Picacho	Track south of main track, for eastward trains from Gila Line only. Track north of main track, for eastward and westward trains.
Red Rock	Track north of main track, for eastward trains. Track south of main track, for westward trains.
Jaynes	Track north of main track, for westward trains. Track south of main track, for eastward trains.
Benson	Track north of main track, for eastward trains. Track south of main track, for westward trains.
Dragoon	Track north of main track, for westward trains. Track south of main track, for eastward trains.
Bowie	Track north of main track, from west switch to switch just east of station building, for eastward trains. Track north of main track, from east switch to switch just east of station building, for westward trains.
Steins	First track north of main track, for westward trains. Second track north of main track, for eastward trains.
San Carlos	Track north of main track.

Abbreviations used for sidings: "E" for Eastward, "W" for Westward, "M" for Middle, "N" for North, "S" for South.

SPECIAL INSTRUCTIONS

RULE 221. Trains must obtain clearance before leaving Tempe to or from Creamery Branch, and at Bowie and Miami.

Trains must obtain clearance at Phoenix Yard, except westward trains terminating at Phoenix.

Trains originating at Phoenix must obtain clearance before leaving Phoenix Yard.

RULE 824. INSTRUCTIONS FOR SETTING HAND BRAKES:

YUMA	
Freight Trains	Four brakes on east end.
PHOENIX	
Freight Trains	Two brakes on west end. Two brakes on east end.
TUCSON	
Passenger Trains	Two brakes on west end. Two brakes on east end.
Freight Trains	Fifteen brakes on west end. Ten brakes on east end.
TUCSON—P.F.E. YARD	
Each cut of cars	Seven brakes on west end.
S. P. tracks Nos. 1, 2, and 3	Fifteen brakes on west end.

Hand brakes on passenger trains are to be set after engine is spotted for taking oil. If necessary to detach engine after these hand brakes have been released, employe before detaching engine must see that sufficient hand brakes have again been set.

Hand brakes on freight trains must be securely set after train or cut has stopped, unless yardmen immediately take charge and yard engine is coupled to cars. Any employe releasing any of these brakes must set as many others to replace them.

RULE 825. Outfit cars must not be left next to oil or gasoline loading or unloading locations; warehouses; lumber yards or other buildings.

RULE 834. Tank cars, or open-top cars loaded with rail, pipe, structural steel, lumber, poles or mounted wheels, when such lading projects above sides and end walls of car, must not be placed in train next to cab of cab-in-front type AC class engines.

RULE 836. Cars moved from one station to another ahead of engine on descending grade must be chained to the engine. Switching movement on descending grades must be protected by a derail. When practicable engine must be kept on descending grade end of cars.

When necessary to move cars ahead of engine 20 MPH must not be exceeded.

RULE 883. Engines under steam must not be stored or left unattended on tracks that are not protected by derails against entry to main track. When chains or blocking available wheels must be blocked.

AUTOMATIC BLOCK SYSTEM

RULE 509. When making a reverse movement on main track after moving out of siding or other track, in block system limits, train or engine will, unless movement be completed beyond the governing signal, proceed as if signal be in stop position.

The following block signals equipped with triangular number plate displaying the letter "P" have included in their control limits some special protective device. When these signals indicate "stop," in addition to complying with Rule 509, careful inspection must be made of the track or structure, as indicated below, and it must be known that they are safe for passage of trains before proceeding:

Signal	Protects	Location
P-7372	Spring Switch	End of double track, East Yard
P-7375	" "	" " " " " "
P-7532	" "	End of double track, Dome
P-7535	" "	" " " " "
P-9052	" "	West end of freight lead, Phoenix
P-9075	" "	East end of double track, Phoenix Yard
P-9810	" "	End of double track, Stockham
P-9813	" "	" " " " "

At Yuma, operation through gantlet track over Colorado River Bridge will be governed by positive block Signals 7320 and 7322 west of bridge, and Signals 7321 and 7323 east of bridge. Speed of eight MPH must not be exceeded until engine has cleared gantlet track. Trains and engines will operate within the above limits, in accordance with positive block signal indications, which supersede the superiority of trains. Second-class and inferior trains and engines must not occupy positive block or overlaps in connection therewith when it is known a first-class train will thereby be delayed.

When signals indicate "stop" and no train or engine in block, send flagman ahead immediately and after flagman has traversed block to opposing signal, proceed with caution.

Signal 7320 governing eastward movement against the current of traffic on westward main track will indicate "proceed" only when train or engine is on approach circuit and push-button opposite signal is pressed.

Signal 7321 governing westward movement against the current of traffic on eastward main track will indicate "proceed" only when train or engine is within 275 feet of signal.

When a train or engine has received a proceed indication from either Signal 7323 or 7321 and is holding the indication by reason of standing within less than 275 feet of signal, the signal may be released and "proceed" indication secured on adjoining track by operating proper push-button located on signal case adjoining Signal 7323 after train it is desired to move has entered approach circuit. Operating push-button 7321-PB will place Signal 7321 at "stop" and clear Signal 7323. Operating push-button 7323-PB will place Signal 7323 at "stop" and clear Signal 7321.

Signal 7322 will not indicate "proceed" until after engine has passed overlap post located 1100 feet west of this signal.

Eastward trains waiting at Colorado for a westward train will remain west of overlap post.

Directions for use and operation of push-buttons located inside push-button box.

Westward trains moving against the current of traffic from crossover at east end of Yuma yard, Signal 7341 will display stop indication, and train will be required to stop before passing signal. If switches are properly lined and route clear, yardman will then signal engineman with green flag by day and green light by night, as authority to proceed against the current of traffic with caution, not exceeding 15 MPH.

If necessary to move a westward passenger train through the freight yard from the east end of yard to passenger station, yardman will verbally inform engineman of this fact and notify him as to track which is to be used. Trains under such conditions must move with caution not exceeding 10 MPH.

At Phoenix, Crossing - A.T. & S.F. Wye.
Signal 9052 governs eastward movements.
Signal 9053, on main track, and
Signal 9055, on freight lead, govern westward movements.

If either of these signals indicates "stop," train or engine, after stopping, and observing wye track to be clear of opposing movements, may proceed in accordance with Rule 509, and in addition must provide flag protection on the intersecting track unless derail thereon is in derailing position.

At Kendall, eastward trains on main track, stop west of Signal 9112 to wait for or meet opposing trains.

Eastward trains on second main track will be governed by position of Signals 9112 and 9113 before entering main track.

Account no overlap on light Signal 9838 located at end of block just east of Tucson yard office, and no overlap on light Signal 9841 located just west of car shop on Nogales Branch, trains and engines moving between these signals, and on passenger track No. 1 between west end of car shed and light Signal 9838, must do so with caution.

On track No. 2 between Tucson and Mescal:

Eastward trains will be governed by Rule 509 applicable to double track.

Westward trains Mescal to Esmond will be governed by Rule 509 applicable to single track.

Westward trains Esmond to Tucson will have no block signal protection after passing Signal 9978.

Between Tucson and Polvo, automatic signals are on the left of the track in the direction of movement.

SPRING SWITCHES

Spring Switches are identified by target on switch stand bearing the letters "SS."

When a block signal in advance of a facing point spring switch indicates "stop," careful examination of switch must be made before passing over it. When making trailing point movement and train is stopped on switch, a reverse movement must not be made, nor the slack taken until the switch has been thrown by hand. When movement has been completed through switch, reverse movement must not be made until point closes.

Running switches are prohibited and sand, blow-off cocks and injectors must not be used or boosters started while engine is standing on or passing over such switches.

These switches located as follows and speed indicated must not be exceeded passing through turnout:

		Signal	MPH
East Yard	Trailing eastward	7372	25
	Facing westward	7375	60
Dome	Facing eastward	7532	25
	Trailing westward	....	30
Phoenix	Main track and west end freight lead:		
	Facing eastward	9052	15
	Trailing westward	....	15
Phoenix Yard	East end double track:		
	Trailing eastward	....	15
	Facing westward	9075	15
Stockham	Facing eastward	9810	50
	Trailing westward	9813	35

RULE 511. Within block signal limits after switches of a crossover are thrown wait three minutes before crossing over unless block signals protecting the movement can be seen to be in stop position not less than one-half mile distant.

RULE 516. Overlap posts located as follows:

23rd Ave. Phoenix	Middle of Siding	Eastward trains.
	" " "	Westward trains.
McQueen	" " "	Eastward trains.
Roskruge	" " "	Eastward trains.
	" " "	Westward trains.
Cortaro	" " "	Eastward trains.

INTERLOCKING

WELLTON

Limits extend from two-arm signals on Gila Line and on Phoenix Line 4,000 feet east of station building to light signal on westward track 400 feet west of station building and to two-arm signal on eastward track 1,000 feet west of station building.

The derail at east end of siding is electrically locked, and can be operated by trainmen only when released by signal operator.

Switches and derails to spurs leading from westward main track, just west and east of station building are hand-thrown, but must not be used until permission is secured from signal operator.

TUCSON, SIXTH AVENUE

Limits on westward track extend from dwarf signal at tower to Signal 9835, and on eastward track from dwarf signal opposite Signal 9835 to dwarf signal at tower.

Signals prescribed by Rule 628 may be given from tower.

One long sound of the engine whistle will be signal to Towerman for movement on westward main track with the current of traffic. Whistle signal to be used only when necessary.

MESCAL

Interlocking signals of the Rio Grande Division will display indication in the upper quadrant. Signal arm extended upward parallel to signal mast indicates "proceed."

Limits are between home signals governing east switch of east crossover and west switch of west crossover on Rio Grande Division, and home signals governing east and west switches of sidings on Tucson Division. Switches are controlled by signal operator, except switches leading from north siding to water and outfit spurs; from south siding to both legs of wye and to west end of coal track. Switch and derail east end coal track are hand-thrown but must not be used until permission is secured from signal operator.

Where hand signals, as prescribed by Rule 628, cannot be seen, trains stopped will call the signal operator and secure permission to proceed; also to throw switches by hand in event the remote control appliance is inoperative.

RULE 663 (b). When authority is received by telephone to proceed through the limits of an inoperative interlocking signal, member of the crew must make careful examination of facing point switches before passing over them.

TRAIN INSPECTION

Trains containing carload shipments of T. N. T. bombs, loaded projectiles and other such articles of a highly sensitive nature should be stopped for inspection at intervals of not to exceed 50 miles, provided any car in the train containing articles of this nature is loaded in excess of 65 per cent of its marked capacity.

Engines running light on descending grades must stop for inspection at freight train inspection points.

Freight trains must be inspected at each water stop. When conditions are favorable, and in the judgment of conductor and engineer it is safe to do so, and when additional stops can thereby be avoided, freight trains may run between water stops without stopping for inspection, provided the distance is not over 60 miles, except freight trains and light engines may run between Tucson and Maricopa, and between Aztec and Yuma, for inspection. This does not relieve trainmen, however, from making inspection when stops permit, or whenever it is necessary in the judgment of conductor or engineer. On branch lines distance of 40 miles must not be exceeded, and on descending grade must stop at Cutter on Globe Branch.

Mixed trains, including military trains, made up in part of freight cars equipped with cast iron wheels, shall be required to comply with rules and time-table instructions applying to freight trains as they relate to stopping for train inspection, likewise speed restrictions.

METHOD OF DISPATCHING TRAINS BETWEEN TUCSON AND MESCAL

Dispatching of Mescal Subdivision of Rio Grande Division will be handled by Rio Grande Division, except that portion between Mescal and Tucson on Track No. 1 which will be handled by dispatching force of Tucson Division and which will be operated under double-track rules as westward track in conjunction with Track No. 2 of Bowie Subdivision of Tucson Division as Eastward Track.

Rule D-97 (A) will apply on Tracks No. 1 and No. 2 between Tucson and Mescal, except that extra trains must obtain clearance, or proper train-order signal, or permission from train dispatcher before using either track.

Trains from Bowie Subdivision moving to Mescal Subdivision, and trains on Mescal Subdivision moving through Mescal, with the same conductor and engineer operating through Mescal, may be issued train orders on one subdivision that affect their movements on either, or both subdivisions. Any such train orders issued by one division to a train on the other division must be transmitted to the other division addressed to Dispatcher before complete is given to the order addressed to the train; and such orders must be shown on clearance issued by the division on which train originates.

RULE 83 (B). When a regular train is checked on Bowie or Mescal Subdivision, it will not be necessary to check the register at Mescal against the same train.

RULE 83 (D). Westward trains may leave Mescal without clearance provided train is properly cleared by train-order signal.

RULE 206 (A). Regular trains and sections of schedules authorized on Bowie or Mescal Subdivisions are authorized to assume corresponding schedules or sections of schedules on Bowie or Mescal Subdivisions at Mescal without clearance.

AIR BRAKE RULES

RULE 24. Freight trains may pass

Mescal, Eastward
Estrella, Dragoon and Steins, Westward
Pinal, Eastward and Westward

without stopping for purpose of rear end air test if proceed signal is given from rear by trainmen, after complying with Air Brake Rule 4, and air gage indicates required air brake pressure. Speed approaching summit must not exceed 15 MPH.

If proceed signal is not given or received, train must stop and rear end air test be made.

RULE 33. Retainers will be used on grades of 1.4% to 1.5% on freight trains of less than 110 M's per operative brake when necessary in the judgment of conductor and engineer.

On freight trains averaging 110 M's and over on grades of 1.4% to 1.5% and on all freight trains on grades of 1.5% and over, retainers will be used as follows:

Mescal to Benson........	1.4%	grade, One Retainer for each	150 M's
Steins to Mondel........	1.4%	" " " " "	150 M's
Steins to Bawtry........	1.4%	" " " " "	150 M's
Sibyl to Benson.........	1.4%	" " " " "	150 M's
Pinal to Globe..........	2%	" " " " "	120 M's
Globe to Burch..........	2%	" " " " "	120 M's
Live Oak to Miami......	3%	" " " " "	100 M's
Miami to Burch..........	1.4%	" " " " "	150 M's
Pinal to Cutter..........	2.2%	" " " " "	120 M's

When retainers are used, stops will be made for inspection and to permit heat of wheels to equalize, as follows:

Eastward: Chamiso
Westward: Fenner
Vanar

Communicating signal will not be used on train No. 370.

RULE 38. Gila—When engine crew and/or train crew is changed on passenger trains, but engine is not changed and no angle cock has been closed except for detaching cars on the rear, rear-end air brake test will be made as follows:

On a passenger train after the brake pipe has been charged to standard pressure, the engineer will apply the brakes with a 10-pound reduction, then signal the trainmen by one sound of the whistle. The angle cock on the rear of the train will then be opened gently, allowing only enough air to escape to cause brake pipe gage hand in cab to fall without making an emergency application, and then closed. When the engineer notes the hand falling he will answer with two sounds of the whistle. The trainman will immediately signal by four sounds of the communicating signal to release the brakes. Engineer will then release the brakes by placing the automatic brake valve handle in release until brake pipe is charged to not less than 5 pounds below standard pressure, slowly return it to running position, then wait until brake pipe pressure has settled and make one short release by moving the handle momentarily to release and back to running position.

This test to be followed by running test in accordance with Rule 39 as soon as speed permits after starting train.

RULE 39. Running air test not required of eastward passenger trains approaching Crossing A. T. & S. F. wye.

Incoming passenger enginemen will leave automatic air brakes set on trains at Tucson, Phoenix and Yuma after final stop has been made. Outgoing enginemen will release brakes on signal from carmen, this signal to be given only after all switching has been done.

MISCELLANEOUS

1. At Wellton, Aztec, Sentinel, Gila, Casa Grande, Florence, Hayden Jct., Benson, Bowie, and San Simon, water for engine purposes is treated and must not be taken for domestic use except as follows:

Aztec, water rack.

Sentinel, water rack and two columns at east end.

Hayden Jct., by closing valve between treater and water column.

Benson, either of the two columns at station, by first opening switch in box on outside of freight house.

Bowie, notify pumper.

When filling water cars for domestic purposes at Hayden Jct., Benson, or Bowie, after closing valve between treater and water column, fill engine tank to drain line of treated water before filling water cars.

At Aztec, westward freight trains take water when possible and take water at Sentinel only when it will avoid delay west of there.

At Sentinel, eastward freight trains take water and fill water car, and take water at Aztec only when necessary or when it will avoid delay at Sentinel.

At Saddle, emergency water station and should take only enough to reach next water station.

At Maricopa, eastward and westward freight trains take water, and if necessary, fill water car.

At Benson, when business is heavy, westward freight trains, including light engines, take water at columns at station, to avoid shortage in east tank.

At Sibyl, westward identified and other important freight trains may take water if it will avoid stopping at Benson. Other freight trains will not take water except in case of emergency, and then only sufficient to reach next water station.

In all cases where it is necessary to make a short move with heavy freight train to reach water or oil column, including that required to spot second engine of double-headed train, engine must be cut off before spotting at column.

4. One helper as restricted Par. 4(b) and 4(g) may be placed behind caboose if of steel underframe construction and cars ahead of caboose are not rear end cars; helper placed ahead of caboose must be ahead of rear end cars.

In helper service:

(a) No helper engine will be placed behind wooden underframe cars or cabooses.

(b) Engines weighing more than 235,000 pounds on the drivers will not be placed behind steel underframe cabooses.

(c) In no case will more than one helper engine be placed behind steel underframe cabooses.

(d) When helper engines are used in rear of freight trains, consolidation and lighter class must be placed behind heavier class.

(e) Engines must not be cut off or coupled to a train while same is in motion.

For the purpose of pushing trains out of yards:

(f) No engine will be placed behind wooden underframe caboose or other wooden frame equipment.

(g) Engines weighing more than 235,000 pounds on the drivers will not be placed behind steel underframe cabooses.

(h) Air will not be coupled through pusher engine.

(i) Yard engines regularly so used will be equipped with Russell-Jordan device to hold the coupler pin from dropping, thus making it unnecessary for employees to uncouple the pusher engine when cutting off.

(j) In no case shall the knuckle be removed, or closed, or uncoupling lever temporarily fastened in release position on a pusher engine, as means of preventing coupling being made.

(k) Unless local conditions require, it will not be necessary to stop trains to detach pusher engines.

5. At Litchfield, gate at entrance Airplane Spur is locked with Government lock, and to gain entrance it will be necessary for engineer to sound a long and short blast of steam whistle and the watchman on duty will take care of the opening and closing of the gate.

At Litchfield Park, Boswell Spur is protected by gate, which must be kept closed and locked when not in use.

At Tovrea, entrance to Tovrea Packing Co. plant is protected by gates, which must be kept closed and locked when not in use. Look out for rubbish and material alongside tracks around plant.

At Tovrea chute across the ice track at packing plant, located one-half car length south of bumper.

This chute when in normal position, will extend across and about two feet above a car, but will not clear a man on top of car.

When in use will be in slanting position from the second floor of Tovrea plant to auto truck backed across ice track, and when so in use, cars cannot be shoved to bumper.

At Hayden, entrance to Kennecott Copper Corp'n plant is protected by gate, which must be closed and locked at night.

At Coolidge, cars must not be detached in motion to Indian Service spur. Gate at entrance must be kept closed and locked when not in use.

At Tucson, P. F. E. yard, look out for ice and rubbish alongside tracks.

At Willcox, look out for bedding sand between tracks 2 and 3.

7. Capacity of sidings between clearance points is based on an average car length of 49 feet not including engines and caboose.

SPECIAL INSTRUCTIONS

10. ENGINES HEAVIER THAN THOSE SHOWN MUST NOT OPERATE ON FOLLOWING LINES OR TRACKS.

Mk 7, 8 & 9 CLASS

Creamery Branch.
Tempe Branch sidings and spurs.
Christmas Branch.

Mk 2, 4, 5 & 6 CLASS

Tempe..............Tempe Milling Co., Phoenix Mill and gravel pit spurs.
Tracks 2 and 3.
Mesa...............McKellips, Standard Oil, and Texas Oil spurs.
Shell Oil and Independent Cotton & Oil Co. spurs.
Mutual Cotton Oil spur.
Union Oil Co. spur.
Mesa Milling Co. spur.
Nogales Branch.
Globe Branch.

C 8, 9, 10 & P CLASS

Ocapos..............Spur.
Estrella..............Spur.
Heaton..............Spur.
Kendall..............River track east of spur.
Creamery Branch....Siding.
Creamery..............Track east of Creamery plant.
Mesa..............Drew's spur (Must back in).
Magma..............Spur.
Christmas Branch....(Between Winkelman and Christmas.)

Engines must not use:

Spurs: Buckeye, Seaside Oil Co.; Florence; Burns; Wymola.

Between Price and Christmas look out for rock and land slides.

Between Naches and Peridot look out for rock and land slides.

11. At Phoenix, No. 370 and freight trains will use freight lead between Signal P-9052 and west end of double track.

At Phoenix, Santa Fe and Southern Pacific trains may jointly use tracks at east and west end of Union Station. Yard and light engines must take every precaution possible to avoid delaying first-class trains on all tracks within Union Station zone. Trains will approach switch at entrance to Union Station tracks prepared to stop and will proceed only when track is known to be clear.

At Bowie, No. 5 track in west yard must be kept clear for through movement.

15. At Yuma, eastward freight trains must not pass Signal 7328 and westward trains, except first-class must not pass Signal 7341 without receiving proceed signal from yardman, using green flag by day and green light by night.

At Tucson, westward freight trains must not pass first crossover switch west of Signal 9851 without proceed signal from yardman.

Eastward freight trains, before entering train yard, after passing 6th Avenue interlocking plant, must receive proceed signal from yardman.

Yardman must use white flag by day and green light by night.

Westward trains must not pass east crossover switch at "End of Block" opposite light Signal 9838 on Passenger track No. 1, 405 feet west of west end of car shed, without proceed signal from yardman, unless this switch is lined for movement on Passenger track No. 1.

20. All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels.

Wooden baggage, express and other head-end cars, unless equipped with steel center sills must not be used in passenger trains.

Head-end passenger cars so constructed or loaded as to prevent trainmen passing through must not be handled on rear of any passenger train. Freight cars must not be handled behind any car carrying passengers. The term "freight" does not include a baggage, express, or mail car, or a caboose.

When necessary to handle passenger equipment, except official cars in freight trains, it must be placed next to caboose, provided rear-end freight cars in train will permit.

25. Electric lanterns may be used for displaying white light only, except may be used by herders for displaying green lights.

SPEED RESTRICTIONS

Maximum speed of passenger trains must not exceed 50 MPH and freight and mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or "fixed signal."

Pages	TERRITORY	PASSENGER				FREIGHT			LT. ENGINES RUNNING F'WD.		
		Maximum	Mk 5, 6, 7 8 ,9 M 4, 6, 9, 11	Mk 2, 4	SP 1, 2, 3 F 1, 3, 4, 5 C 8, 9, 10	Freight Maximum	Engines Backing	Switch Engines S-SE	T 37 Mt 1, 2, 3, 4, 5 P 1, 3, 5, 12	Mk 5, 6, 7 8, 9 M 4, 6, 9, 11 SP 1, 2, 3 F 1, 3, 4, 5 C 8, 9, 10	Mk 2, 4
	Through interlocking limits with caution.										
	Through crossovers, turnouts except where otherwise specified	15	15	15	15	15	15	....	15	15	15
2	Yuma Yard, west and east switches	15	15	15	15	15	15	15	15	15	15
2	Yuma, east switch - End of double track, East Yard	60	50	40	45	40	30	20	45	35	30
2	East Yard, end of double track - M.P. 745	65	50	40	45	40	30	....	45	35	30
2	M.P. 745 - 748.58	60	50	40	45	40	30	....	45	35	30
2	M.P. 748.58 - 755.12	30	30	30	30	30	30	....	30	30	30
2	M.P. 755.12 - 762.88	50	50	40	45	35	30	....	45	35	30
2	M.P. 762.88 - Wellton, west interlocking limit	60	50	40	45	40	30	....	45	35	30
2	Wellton, west interlocking limit - M.P. 766 (Westward track)	50	50	40	45	35	30	....	45	35	30
2	Wellton, east crossovers	25	25	25	25	20	20	....	20	20	20
2	Wellton, east frogs	35	35	35	35	35	30	....	35	35	30
2	Wellton, east interlocking limit - M.P. 776.36	60	50	40	45	40	30	....	45	35	30
2	M.P. 776.36 - 777.78	50	50	40	45	35	30	....	45	35	30
2	M.P. 777.78 - 845.94	60	50	40	45	40	30	....	45	35	30
2	M.P. 845.94 - 847.28	50	50	40	45	35	30	....	45	35	30
2	M.P. 847.28 - 887.42	60	50	40	45	40	30	....	45	35	30
2	M.P. 887.42 - 887.61	50	50	40	45	35	30	....	45	35	30
2	M.P. 887.61 - 890.53	60	50	40	45	40	30	....	45	35	30
4	Litchfield Branch	20	20	20	20	20	15		20	20	20
2	M.P. 890.53 - 890.78	50	50	40	45	35	30	....	45	35	30
2	M.P. 890.78 - 893.54	60	50	40	45	40	30	....	45	35	30
2	M.P. 893.54 - 894.48	50	50	40	45	35	30	....	45	35	30
2	M.P. 894.48 - Phoenix, Signal 9048	60	50	40	45	40	30	....	45	35	30
2, 3	Phoenix, Signal 9048 - M.P. 907.90	20	20	20	20	20	20	20	20	20	20
3	Phoenix Yard Limit - Kendall (second main track)	25	25	25	25	25	25	....	25	25	25
3	Phoenix, M.P. 907.90 - 912.74	60	50	40	45	40	30	....	45	35	30
3	M.P. 912.74 - 913.12	40	40	40	40	30	30	....	40	35	30
3	M.P. 913.12 - 913.77	50	50	40	45	35	30	....	45	35	30
3	M.P. 913.77 - Tempe, west City Limit	20	20	20	20	20	20	....	20	20	20
5	Creamery Branch	20	20	20	20	20	20	....	20	20	20
3	Tempe, east City Limit - M.P. 915.79	40	40	40	40	25	25	....	40	25	25
4	Tempe Branch	20	20	20	20	20	20	....	20	20	20
3	M.P. 915.79 - 920.86	60	50	40	45	40	30	....	45	35	30
3	M.P. 920.86 - Mesa, west switch	40	40	40	40	25	25	....	40	25	25
3	Mesa Yard, west switch - east City Limit (except curve M.P. 922)	20	20	20	20	20	20	....	20	20	20
3	Mesa Curve M.P. 922	10	10	10	10	10	10	....	10	10	10
3	Mesa, east City Limit - M.P. 924.12	60	50	40	45	40	30	....	45	35	30
3	M.P. 924.12 - 927.69	50	50	40	45	35	30	....	45	35	30
3	M.P. 927.69 - Chandler, west City Limit	60	50	40	45	40	30	....	45	35	30
3	Chandler, east City Limit - M.P. 945.49	60	50	40	45	40	30	....	45	35	30
3	M.P. 945.49 - 946.78	50	50	40	45	35	30	....	45	35	30
3	M.P. 946.78 - Picacho, west wye switch	60	50	40	45	40	30	....	45	35	30
3	Picacho, west wye switch - Crossover	30	30	30	30	30	30	....	30	30	30
3	Picacho crossover	25	25	25	25	20	20	....	20	20	20
3	Picacho crossover - M.P. 938	60	50	40	45	40	30	....	45	35	30
3	M.P. 938 - 979.7	65	50	40	45	40	30	....	45	35	30
3	M.P. 979.7 - Signal 9828	50	50	40	45	35	30	....	45	35	30
3, 7	Tucson Yard, Signal 9828 - M.P. 985	20	20	20	20	20	20	20	20	20	20

SPEED RESTRICTIONS—(Continued)

Maximum speed of passenger trains must not exceed 50 MPH and freight and mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or "fixed signal".

Pages	TERRITORY	PASSENGER				FREIGHT			LT. ENGINES RUNNING F'WD.		
		Maximum	Mk 5, 6, 7 8, 9 M 4, 6, 9, 11	Mk 2, 4	SP 1, 2, 3 F 1, 3, 4, 5 C 8, 9, 10	Freight and Mixed Maximum	Engines Backing	Switch Engines S-SE	T 37 Mt 1, 2, 3, 4, 5 P 1, 3, 5, 12	Mk 5, 6, 7 8, 9 M 4, 6, 9, 11 SP 1, 2, 3 F 1, 3, 4, 5 C 8, 9, 10	Mk 2, 4
4	Wellton, east crossovers	25	25	25	25	20	20	....	20	20	20
4	Wellton, east frogs	35	35	35	35	35	30	....	35	35	30
4	Wellton, east interlocking limit - M.P. 772.06	50	50	40	45	35	30	....	45	35	30
4	M.P. 772.06 - 772.78	60	50	40	45	40	30	....	45	35	30
4	M.P. 772.78 - 792.50	65	50	40	45	40	30	....	45	35	30
4	M.P. 792.50 - 794.03	30	30	30	30	30	30	....	30	30	30
4	M.P. 794.03 - 795	50	50	40	45	35	30	....	45	35	30
4	M.P. 795 - 800	65	50	40	45	40	30	....	45	35	30
4	M.P. 800 - 813	50	50	40	45	35	30	....	45	35	30
4	M.P. 813 - 817	65	50	40	45	40	30	....	45	35	30
4	M.P. 817 - 823.61	50	50	40	45	35	30	....	45	35	30
4	M.P. 823.61 - 825.18	30	30	30	30	30	30	....	30	30	30
4	M.P. 825.18 - Gila, west switch	65	50	40	45	40	30	....	45	35	30
4-5	Gila yard, west and east switches	30	30	30	30	30	30	....	30	30	30
5	Gila, east switch - M.P. 866.98	65	50	40	45	40	30	....	45	35	30
5	M.P. 866.98 - 867.85	50	50	40	45	35	30	....	45	35	30
5	M.P. 867.85 - 870.12	30	30	30	30	30	30	....	30	30	30
5	M.P. 870.12 - 874.48	50	50	40	45	35	30	....	45	35	30
5	M.P. 874.48 - 886.36	65	50	40	45	40	30	....	45	35	30
5	M.P. 886.36 - 898	50	50	40	45	35	30	....	45	35	30
5	M.P. 898 - 902	65	50	40	45	40	30	....	45	35	30
5	M.P. 902 - Casa Grande, west City Limit	60	50	40	45	40	30	....	45	35	30
5	Casa Grande, east City Limit - Picacho	60	50	40	45	40	30	....	45	35	30
7	Tucson yard, Track No. 1, signals 9883 - 9851					20	20	20	20	20	20
7	Tucson, M.P. 985 - 991	50	50	40	45	35	30	....	45	35	30
7	M.P. 991 - 997	65	50	40	45	40	30	....	45	35	30
7	M.P. 997 - 1004.27	50	50	40	45	35	30	....	45	35	30
7	M.P. 1004.27 - 1010.36	30	30	30	30	25	25	....	25	25	25
7	M.P. 1010.36 - 1012.62	50	50	40	45	35	30	....	45	35	30
7	M.P. 1012.62 - 1014	30	30	30	30	25	25	....	25	25	25
7	M.P. 1014 - 1016.77	50	50	40	45	35	30	....	45	35	30
7	M.P. 1016.77 - 1018.08	30	30	30	30	25	25	....	25	25	25
7	M.P. 1018.08 - Mescal, west interlocking limit	40	40	40	40	30	30	....	40	30	30
7	Mescal interlocking plant, through crossovers to R.G.Div.	25	25	25	25	25	25	....	25	25	25
7	Mescal, east interlocking limit - M.P. 1026	50	50	40	45	35	30	....	45	35	30
7	M.P. 1026 - 1029	65	50	40	45	40	30	....	45	35	30
7	M.P. 1029 - 1030.86	50	50	40	45	35	30	....	45	35	30
7	M.P. 1030.86 - Benson, west switch	40	40	40	40	30	30	....	40	30	30
7	Benson yard, west and east switches	30	30	30	30	30	30	....	30	30	30
7	Benson, east switch - M.P. 1036.96	50	50	40	45	35	30	....	45	35	30
7	M.P. 1036.96 - 1040.78 *(See foot note)	28	28	28	28	25	25	....	25	25	25
7	M.P. 1040.78 - 1044.50	45	45	40	45	30	30	....	45	30	30
7	M.P. 1044.50 - 1045.14 *(See foot note)	28	28	28	28	25	25	....	25	25	25
7	M.P. 1045.14 - 1052.36	40	40	40	40	30	30	....	40	30	30
7	M.P. 1052.36 - 1058	50	50	40	45	35	30	....	45	35	30
7	M.P. 1058 - Willcox, west City Limit	65	50	40	45	40	30	....	45	35	30
7	Willcox, east City Limit - M.P. 1076	60	50	40	45	40	30	....	45	35	30
7	M.P. 1076 - 1080	65	50	40	45	40	30	....	45	35	30
7	M.P. 1080 - 1084.42	60	50	40	45	40	30	....	45	35	30
7	M.P. 1084.42 - 1094.62	50	50	40	45	35	30	....	45	35	30
7	M.P. 1094.62 - Bowie, west switch	60	50	40	45	40	30	....	45	35	30
7	Bowie yard, west and east switches	30	30	30	30	30	30	....	30	30	30
7	Bowie, east switch - M.P. 1121	65	50	40	45	40	30	....	45	35	30
7	M.P. 1121 - 1122.51	50	50	40	45	35	30	....	45	35	30
7	M.P. 1122.51 - 1122.60	40	40	40	40	30	30	....	40	30	30
7	M.P. 1122.60 - 1124.44	50	50	40	45	35	30	....	45	35	30
7	M.P. 1124.44 - 1128.68	30	30	30	30	25	25	....	25	25	25
7	M.P. 1128.68 - Lordsburg	50	50	40	45	35	30	....	45	35	30

***Passenger trains handled by MT 1-2-3-4-5 class engines maximum speed 30 M.P.H.**

Page	TERRITORY	PASSENGER		FREIGHT		LIGHT ENGINES RUNNING FORWARD	
		Maximum	Gas-Electric T-37 Mk 2, 4, 5, 6, 7, 8, 9 M 4, 6, 9, 11 C 8, 9, 10	Freight and Mixed Maximum	Engines Backing	T-37 Mk 5, 6, 7, 8, 9 M 4, 6, 9, 11 C 8, 9, 10	Mk 2, 4
5	Christmas Branch, except	40	....	30	....	....	....
5	M.P. 923.89 - 924.08	35	35	25	20	35	30
5	M.P. 924.08 - 955.93	40	40	30	20	35	30
5	M.P. 955.93 - 956.07	35	35	25	20	35	30
5	M.P. 956.07 - 964.28	40	40	30	20	35	30
5	M.P. 964.28 - 964.54	30	30	20	20	30	30
5	M.P. 964.54 - 968.79	40	40	30	20	35	30
5	M.P. 968.79 - 972.07	30	30	30	20	30	30
5	M.P. 972.07 - 972.15	15	15	15	15	15	15
5	M.P. 972.15 - 974.12	30	30	25	20	30	30
5	M.P. 974.12 - 974.20	15	15	15	15	15	15
5	M.P. 974.20 - 975.34	30	30	30	20	30	30
5	M.P. 975.34 - 975.48	15	15	15	15	15	15
5	M.P. 975.48 - 976.21	30	30	30	20	30	30
5	M.P. 976.21 - 976.36	20	20	20	20	20	20
5	M.P. 976.36 - 980.35	30	30	25	20	30	30
5	M.P. 980.35 - 980.41	15	15	15	15	15	15
5	M.P. 980.41 - 980.97	30	30	25	20	30	30
5	M.P. 980.97 - 981.03	25	25	25	20	25	25
5	M.P. 981.03 - 981.70	30	30	30	20	30	30
5	M.P. 981.70 - 981.78	25	25	25	20	25	25
5	M.P. 981.78 - 983.27	30	30	25	20	30	30
5	M.P. 983.27 - 987.43	25	25	25	20	25	25
5	Ray Jct. yard, M.P. 987.43 - 988.24	15	15	15	15	15	15
5	M.P. 988.24 - 999.53	30	30	25	20	30	30
5	Hayden Jct. yard, M.P. 999.53 - 1000.64	15	15	15	15	15	15
5	M.P. 1000.64 - Winkelman	30	30	25	20	30	30
5	Winkelman - Christmas	15	15	15	15	15	15
6	Nogales Branch, except	35	....	25	....	....	....
6	Tucson yd. M.P. 984 - 986.88	20	20	20	20	20	20
6	M.P. 986.88 - Nogales	35	35	25	20	25	25
6	Nogales yard limits	20	20	20	20	20	20

Page	TERRITORY	Gas-Electric	M-6 T-37	C 8, 9, 10	Freight and Mixed Maximum	Engines Backing	T-37 Mk 5, 6, 7, 8, 9 M 4, 6, 9, 11 C 8, 9, 10	Mk 2, 4
6	Globe Branch, except	40	35	30	30	....	....	....
6	Bowie yard limits	30	30	30	30	30	30	30
6	Bowie east yard limit - M.P. 1126.12	40	35	30	30	20	30	25
6	M.P. 1126.12 - 1126.43	30	30	30	30	20	30	25
6	M.P. 1126.43 - Safford west yard limit	40	35	30	30	20	30	25
6	Safford yard limits	15	15	15	15	15	15	15
6	Safford east yard limit - Pima west city limit	40	35	30	30	20	30	25
6	Pima east city limit - M.P. 1178.03	40	35	30	30	20	30	25
6	M.P. 1178.03 - 1178.17	30	30	30	25	20	30	25
6	M.P. 1178.17 - 1183.7	40	35	30	30	20	30	25
6	M.P. 1183.7 - 1195	30	30	30	20	20	20	20
6	M.P. 1195 - 1207.01	30	30	30	25	20	30	25
6	M.P. 1207.01 - 1217.52	40	35	30	30	20	30	25
6	M.P. 1217.52 - 1218.78	30	30	30	25	20	30	25
6	M.P. 1218.78 - 1220.59	40	35	30	30	20	30	25
6	Globe yard limits, except	15	15	15	15	15	15	15
	Broad St. Crossing	6	6	6	6	6	6	6
6	M.P. 1223.09 - 1231.18	20	20	20	20	15	20	20
6	Miami yard limits	15	15	15	15	15	15	15
6	Inspiration Jct. - Live Oak	10	10	10	10	10	10	10

SPECIAL INSTRUCTIONS

SPEED RESTRICTIONS (Continued)

Following engines are cross counter-balanced and are permitted a maximum speed of 75 MPH:

All GS-1, 2, 3. Mt-1, 2, 3, 4, 5. P-12.

P-7, 8, 10; 2461, 2462, 2463, 2464, 2465, 2467, 2469, 2471, 2472, 2473, 2474, 2475, 2476, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491.

Following engines are cross counter-balanced and are permitted a maximum speed of 55 MPH when handling passenger trains:

F-1, 3, 4, 5; 3619, 3625, 3634, 3636, 3652, 3656, 3658, 3665, 3666, 3676, 3677, 3681, 3682, 3685, 3687, 3692, 3706, 3709, 3711, 3716, 3717, 3727, 3728, 3732, 3737, 3742, 3752, 3765.

All AC-4, 5.

All AC-7, 8.

Maximum speed at which engines backing may be operated is 30 MPH, except must not exceed 15 MPH on curves and approaching grade crossings.

GS engines 1, 2, 3 and 4 Class must not exceed 45 MPH running forward light and 30 MPH running backward light.

SPEED OF TRAINS REGULATED BY ORDINANCES THROUGH CITY LIMITS

PAGE	STATION	MPH
2	Yuma over street crossings	5
3	Tempe	20
3	Chandler	20
5	Casa Grande	25
6	Nogales	20
6	Safford	15
6	Pima	15
7	Willcox	30

Speed restrictions for engines are shown in speed restriction table; however, attention is called to the following maximum speeds at which tenders may be operated.

Tenders having water capacity 7,000 gallons or less, except Classes 70-R-1 and 70-SC-1, maximum speed 50 MPH.

Tenders having water capacity in excess of 7,000 gallons, and including Classes 70-R-1 and 70-SC-1, maximum speed of engines.

Maximum speed of disabled engines hauled in train, or running under own steam, must not exceed:

When pilot removed....................20 MPH
When main rod only removed....................30 MPH
When side rods only removed....................30 MPH
When both main and side rods removed....................20 MPH
When hauled in train and all rods are on....................30 MPH
SP1, 2 and 3 when inside main rod removed or inoperative......30 MPH
S and SE engines, and all other classes of engines when not equipped with engine trucks....................20 MPH

When all weight has been removed from any one pair of drivers on an engine, speed must not exceed 20 MPH.

When all weight has been removed from one wheel of any pair drivers on an engine, speed must not exceed 30 MPH.

Engines operated coupled tender to tender must not exceed speed permitted same engines running backwards.

When an engine has broken main axle and is in condition to be moved, engine should be detached from train and run light to next siding, not exceeding eight miles per hour.

If unable to place engine on siding, then it should be left between switches of siding on main track and proper protection be provided.

Trains with passenger equipment handling steel-wheel box cars, commonly known as PMT cars or foreign line steel-wheel box cars equipped for movement in passenger trains or trains consisting wholly of steel-wheel box cars, except those equipped with high speed trucks, must not exceed 60 MPH.

Kennecott Copper Corp'n R. R. between Hayden Jct. and Hayden Mills is operated by the Tucson Division.

Speed of trains must not exceed 15 MPH.

Grade Hayden Mills to Hayden Jct. 2.2%.

Impaired overhead and side clearance at Hayden Mills Smelter.

(Unless otherwise further restricted by time table, slow board, or train order)

PAGE	TYPE OF ENGINE—TERRITORY—STRUCTURE—LADING, ETC.	M.P.H.
	Trains handling wooden pile-drivers; locomotive cranes with boom disconnected and heavy end forward; steam shovels and ditchers, transported on their own wheels;	
2-3-4	On tangent main tracks	35
5-7	except SPMW 4044	25
4-5-6	On tangent branch tracks	25
All	On all curves....5 MPH less than speed authorized. Where slow boards in place 5 MPH less than shown on slow boards, except when speed indicated is 15 MPH or less be governed by slow boards.	
	Trains handling locomotive cranes with boom disconnected and light end forward (must not be handled in this manner except in emergency):	
2-3-4-5-7	On tangent main tracks	20
All	On curves and on branch tracks	15
	Trains handling locomotive cranes with boom in place, either end forward (to be handled in work trains when practicable):	
2-3-4-5-7	On tangent main tracks	25
All	On curves and on branch tracks	15
All	Trains handling steel pile-drivers may make maximum freight train speed.	
	Trains handling relief outfit with steam derrick:	
2-3-4-5-7	On tangent main tracks	35
4-5-6	On tangent branch tracks	25
All	On all curves.....5 MPH less then speed authorized. Where slow boards in place 5 MPH less than shown on slow boards, except where speed indicated is 15 MPH or less be governed by slow boards.	

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE

Employes are warned that it is dangerous to ride on top or sides of cars while passing these points and that they must protect themselves from injury.

Bulletins may be issued from time to time referring to impaired clearances not listed below.

MILE POST	DESCRIPTION	
733.0	Yuma, ice platform	Side
778.0	Gila River bridge	Side
891.0	Agua Fria River bridge	Side
907.0	Phoenix, ice platform	Side
911.8	Tovrea, meat chute	Overhead
913.4	Tempe, Water User's spur	Overhead and Side
914.0	Salt River bridge	Side
914.4	Tempe, Tempe Milling Co. spur	Side
921.8	Mesa, Texas Oil Co., Drew's spur and ice platform	Side
959.3	Gila River bridge	Side
972.4	Tunnel No. 1 (Christmas Branch)	Overhead and Side
972.5	Gila River bridge (Christmas Branch)	Side
975.4	Rock cut (Christmas Branch)	Side
985.3	Gila River bridge (Christmas Branch)	Side
987.8	Ray Junction, water tank spout	Overhead and Side
988.5	Tunnel No. 2 (Christmas Branch)	Overhead and Side
990.0	Tunnel No. 3 (Christmas Branch)	Overhead and Side
1003.5	Winkelman, ore bins	Side
1007.0	Finney, ore chute	Side
1009.2	Tunnel No. 4 (Christmas Branch)	Overhead and Side
984.2	Tucson, ice platform	Side
1029.6	Tubac, water tank spout	Overhead and Side
1049.8	Nogales, ice platform	Side
1008.1	Cienega Creek bridge	Side
1033.6	San Pedro River bridge	Side
1114.2	San Simon, water tank spout	Overhead and Side
1201.0	San Carlos, water tank and spout	Overhead and Side

SPEED TABLE

SPEED PER HOUR	1 MILE IN MIN. SEC.	SPEED PER HOUR	1 MILE IN MIN. SEC.	SPEED PER HOUR	1 MILE IN MIN. SEC.	SPEED PER HOUR	1 MILE IN MIN. SEC.
6	10.00	25	2.24	39	1.33	53	1.08
8	7.30	26	2.18	40	1.30	54	1.06
10	6.00	27	2.13	41	1.27	55	1.05
12	5.00	28	2.08	42	1.25	56	1.04
15	4.00	29	2.04	43	1.23	57	1.03
16	3.45	30	2.00	44	1.21	58	1.02
17	3.31	31	1.56	45	1.20	59	1.01
18	3.20	32	1.52	46	1.18	60	1.00
19	3.09	33	1.49	47	1.16	61	.59
20	3.00	34	1.45	48	1.15	62	.58
21	2.51	35	1.42	49	1.13	63	.57
22	2.43	36	1.40	50	1.12	64	.56
23	2.36	37	1.37	51	1.10	65	.55
24	2.30	38	1.34	52	1.09		

SURGEONS

LOCATION	NAME	TITLE
San Francisco	Dr. C. A. Walker	Chief Surgeon and Manager
Yuma	Dr. C. S. Powell	District Examiner and Surgeon
Yuma	Dr. C. W. Cain	Asst. District Surgeon
Litchfield	Dr. R. L. Penn	District Surgeon
Buckeye	Dr. G. C. Rubel	District Surgeon
Buckeye	Dr. V. Jeffery	Asst. District Surgeon
Phoenix	Dr. H. D. Ketcherside	District Examiner and Surgeon
Phoenix	Dr. J. E. Drane	Asst. District Surgeon
Phoenix	Dr. A. M. Tuthill	Asst. District Surgeon
Phoenix	Dr. N. A. Ross	Asst. District Surgeon
Phoenix	Dr. D. F. Harbridge	Oculist
Phoenix	Dr. W. A. Schwartz	Aurist
Phoenix	Dr. R. F. Palmer	Consulting Physician and Surgeon
Tempe	Dr. R. J. Stroud	District Surgeon
Mesa	Dr. W. S. Sharp	District Surgeon
Chandler	Dr. J. M. Meason	District Surgeon
Coolidge	Dr. H. E. Pinkerton	Emergency Surgeon
Coolidge	Dr. G. S. Walker	Emergency Surgeon
Gilbert	Dr. L. M. Thompkins	Emergency Surgeon
Florence	Dr. G. E. Huffman	District Surgeon
Ray	Dr. O. E. Utzinger	District Surgeon
Hayden	Dr. C. B. Huestis	District Surgeon
Gila	Dr. L. A. Love	District Examiner and Surgeon
Casa Grande	Dr. J. E. Redden	District Surgeon
Tucson	Dr. C. A. Thomas	Assistant to Chief Surgeon and Exam.
Tucson	Dr. S. Sanger	District Surgeon
Tucson	Dr. V. G. Presson	Acting Division Surgeon
Tucson	Dr. R. A. Wilson	Acting Division Surgeon
Tucson	Dr. E. H Brown	Aurist and Oculist
Tucson	Dr. T. H. Cates	Consulting Aurist and Oculist
Nogales	Dr. J. S. Gonzales	District Examiner and Surgeon
Nogales	Dr. C. S. Smith	Oculist and Aurist
Nogales	Dr. Z. B. Noon	District Surgeon
Benson	Dr. A. N. Shoun	District Examiner and Surgeon
Willcox	Dr. J. C. Wilson	District Surgeon
Willcox	Dr. B. E. Briscoe	District Surgeon
Bowie	Dr. F. W. Parrish	District Examiner and Surgeon
Lordsburg	Dr. C. B. Austin	District Surgeon
Safford	Dr. J. N. Stratton	District Surgeon
Safford	Dr. F. W. Butler	Asst. District Surgeon
San Carlos	Dr. R. D. Cunningham	District Surgeon
Globe	Dr. C. Gunter	District Examiner and Surgeon
Globe	Dr. M. Gunter	Asst. District Surgeon
Globe	Dr. W. A. Holt	Consulting Surgeon
Miami	Dr. C. M. Cron	District Surgeon
Miami	Dr. W. B. Watts, Jr.	Asst. District Surgeon

HOSPITALS

General Hospital	San Francisco, Calif.
St. Joseph's Hospital	Phoenix, Ariz.
St. Mary's Hospital	Tucson, Ariz.

AVERAGE TARE WEIGHTS OF PASSENGER TRAIN CARS

CLASS	NOT AIR-CONDITIONED		AIR-CONDITIONED	
	All-Steel	Steel Underframe	All-Steel Cooling Season	All-Steel Heating Season
Baggage—60 ft.	93,070			
" —66 ft.	127,610			
" —70 ft.	122,620			
" —70 ft. (With Auto. End Door)	125,800			
" —(Dynamo)	98,730			
"		87,120		
Baggage & Mail—60 ft.	103,620			
" " " —69 ft.	124,760			
" " " —70 ft.	129,140			
" " "		103,590		
" " Passenger	108,675	112,640		
Express Refr.—N. P. Ry		74,000		
" " —A. R. E. No. 40- 154		78,000		
" " — " " 155- 224		89,000		
" " — " " 500- 506		110,000		
" " — " " 1101-1175		85,000		
" " —P. F. E. " 500- 799		83,000		
Express, Horse	133,050			
Postal	112,120			
Postal Storage—40 ft.	74,530			
" " —60 ft.	105,120			
Assembly (ACW)			168,950	168,950
Club (ACI)	146,210	122,300	172,200	164,700
Official (NAC)	170,700	155,370		
" ......(ACW) Cars 107-128			182,800	182,800
" ......(ACW) " 140-141			195,040	195,040
Chair—60 ft. (ACI)	100,620		138,000	132,000
" —72 ft. (ACI)			165,000	157,800
" —72 ft. (ACW)			158,700	158,700
" —Streamline—Single (ACS)			120,900	104,500
" — " —Art (ACS)			205,400	172,600
" —74 ft. (ACI)			180,915	173,125
" —74 ft. (ACS)			197,944	181,600
Coaches—60 ft. (ACI)	98,130		136,100	130,100
" —70 ft. (ACI)	137,640		157,800	151,000
" —70 ft. (ACW)	137,640		151,000	151,000
" —72 ft. (ACI)			164,500	157,400
" —72 ft. (ACW)			153,500	153,500
" —73 ft. 6 in. (ACW)			163,000	163,000
" —73 ft. 6 in. (ACI)			168,500	161,200
" —72 ft. (Interurban)	120,000			
All-Day Lunch—Chair	105,970			
" " —Coach	103,875			
Cafe-Coach (ACI)		138,600	155,700	149,000#
Cafe-Lounge (ACI)	148,950	161,200	173,500	166,000
" (ACW)			156,000	156,000
Diner —70 ft.		135,930		
" —72 ft.	155,330	146,930		
" —77 ft. (Arch Roof)..(ACI)	156,000		170,100	162,700
" —77 ft. (" ")..(ACW)			162,950	162,950
" —77 ft. (Clere Story Roof)..(ACW)		165,530	169,450	169,450
" —77 ft. (" " ")..(ACM)			189,581	173,836
" —79 ft. (NAC)	169,100			
" —80 ft. (Clere Story Roof)..(ACM)			201,323	184,700
Lounge......(" " ")..(ACI)			189,800	181,630
" ......(Arch Roof) (ACI)			167,500	160,300
" ......(" ") (ACW)			164,980	157,780
Observation—75 ft. (ACI)	154,400		169,185	161,900
" —77 ft (ACI)			194,543	186,166
"		141,870		
Pullman-Observation (ACI)	160,800	153,000	177,314	169,200
" " (ACM)	160,800	153,000	192,300	176,300
" " Lounge (ACM)	171,200		194,900	178,900
" " " (ACI)	171,200		187,682	179,600
" —Bedroom (ACI)	167,600		183,920	176,000
" — " (ACM)	167,600		195,800	179,800
" —Sleeper (ACM)	163,100		191,100	175,100
" — " (ACI)	163,100		180,075	171,500
" —Tourist (ACM)	153,000		185,200	169,200
" — " (ACI)	153,000		168,663	161,400
Arizona Limited—(7 cars) (ACM)			1,020,800	980,800
Rail, Gas-Electric—400 H.P.	158,400			
" " " —600 H.P.	167,200			

#Steel underframe.

CODE:

NAC—Non-Air Conditioned.
ACI —Air-Conditioned—Ice.
ACM—Air-Conditioned—Mechanical.
ACW—Air-Conditioned—Waukesha.
ACS —Air-Conditioned—Steam Ejector

RATING OF ENGINES—TUCSON DIVISION

IN M'S OF 1,000 LBS. BACK OF TENDER

Nominal Class	OFFICIAL CLASS	ENGINE NUMBERS	Boiler Pressure	Yuma to East Yard Pembroke to Mohawk Lava to Sentinel	East Yard to Pembroke Mohawk to Lava Sentinel to Gila Maricopa to Tucson Wellton to Saddle 2 M. W. of Gillespie to Picacho	Gila to Estrella Saddle to 2 M. W. of Gillespie	Estrella to Maricopa Tucson to Maricopa Estrella to Kim Mohawk to Blaisdell Fortuna to Yuma Picacho to 2 M. E. of Crag 2 M. W. of Gillespie to Wellton	Maricopa to Estrella Blaisdell to Fortuna 2 M. E. of Crag to 2 M. W. of Gillespie	Kim to Mohawk	McQueen to Christmas	Christmas to McQueen	Tucson to Nogales	Nogales to Tucson
M-4	M-63 20/28 126, 135-S	1617 to 1713	190	2550	2900	1900	4300	2900	2100	3150	3750		
M-6, 8	M-63 21/28 150-S, 159-SF	1721 to 1803, 1823 to 1825	200	3050	3600	2250	5000	3600	2500				
M-9	M-63 21/28 150-S, 162-SF	1804 to 1822, 1826 to 1830, 1836	210	3250	3800	2400	5300	3800	2650	4100	4900		
M-11	M-63 22/28 153-S, 162-SF	1832 to 1835	200	3350	3950	2500	5500	3950	2750	4250	5100		
T-37	T-70 24/26 146-S	2105, 2106	175	3100	3700	2300	5200	3700	2550	3700	4400	2350	3250
P-1, 3, 5	P-77 22/28 141-S	2400 to 2452, 2459, 2460	210	2800	3300	2000	4650	3300	2250				
C-8, 9, 10	C-57 22/30 192-S, 200-SF	2513 to 2599, 2698 to 2860	210	3900	4600	2900	6500	4600	3250	4700	5600	3000	4100
P-12	P-73 26/28 189-SF	3120 to 3129	205	4000	4700	2900	6700	4700	3300				
Mk-2, 4	Mk-57 23½/30 206-S, 230-SF	3201 to 3240	210	4500	5200	3300	7300	5200	3600	5650	6750		
Mk-5, 6	Mk-63 26/28 210-S, 233-SF	3241 to 3277	210	5000	5750	3600	8100	5750	4000	6100	7300		
Mk-7, 8, 9	Mk-63 29/30 247-S, 257-SF	3300 to 3324	176 205	5500	6350	4000	8900	6350	4500				
F-1	F-63 27½/32 273-S, 282-SF	3600 to 3652	200	5700	6700	4200	9300	6700	4700				
F-3	F-63 29½/32 297-S, 300-SF	3653 to 3667	200	6500	7600	4800	10800	7600	5400				
F-4, 5	F-63 29½/32 306/B-61-SF	3668 to 3769	200	6700	8000	5000	11500	8000	5600				
F-4, 5	F-63 29½/32 306/B-62-SF												
AC-7, 8	AC-63 $\frac{24-24}{32}$ 515-SF, 532-SF	4151 to 4204	250	10500	12000	8000	14000	12000	8800				
Mt-1,3,4,5	Mt-73 28/30 246/B-60-SF	4300 to 4376	210	5400	6400	3850	9000	6400	4350				
Mt-2	Mt-73 29/30 262-SF	4385 to 4390	210	5600	6600	4000	9300	6600	4500				
GS-4	GS-80 25½/32 267/B-118-SF	4430 to 4449	300	6000	7000	4300	9700	7000	4800				
SP-1	SP-63 $\frac{25}{28-32}$ 316/B-60-SF	5000 to 5048	225	7600	8800	5600	12500	8800	6800				
SP-2, 3	SP-63 $\frac{25}{28-32}$ 317/B-61-SF												
Allowance for empty and underloaded cars		Less than 45 Ms.		6	6	6	6	6	6	6	6	6	6
		45 Ms to 55 Ms.		3	3	3	3	3	3	3	3	3	3
		More than 55 Ms.		0	0	0	0	0	0	0	0	0	0

DIVISION MILEAGE

Main Lines

Yuma to Lordsburg	S. P. R. R.			412.60	
Tucson to South Yard Junction	E. P. & S. W. R. R.			7.69	
Wellton to Picacho, via Phoenix	A. E. R. R.		195.88		
	S. P. Co.		13.10		
	S. P. R. R.		.03	209.01	
Total Main Lines					629.30

Branches

Benson-Fairbank	S. P. R. R.	At Benson		.64	
Christmas	S. P. Co.	McQueen to Winkelman	74.40		
	A. E. R. R.	Erman to Christmas	12.26		
	K. C. C.	Hayden Jct. to Hayden	.32	86.98	
Creamery	A. E. R. R.	At Tempe	.47		
	S. P. Co.	Tempe to Normal Jct.	1.72	2.19	
Globe	A. E. R. R.	Bowie to Inspiration Jct.		136.14	
Litchfield	A. E. R. R.	Litchfield to Litchfield Park		4.92	
Nogales	S. P. R. R.	Tucson to Nogales		65.79	
Tempe	A. E. R. R.	Tempe Jct. to West Chandler		8.73	
Yuma Valley	Yuma Valley R. R.	Yuma to Somerton		15.00	
Total Branches					320.39
Total					949.69

RATING OF ENGINES—TUCSON DIVISION—Continued

IN Ms OF 1,000 LBS. BACK OF TENDER

Nominal Class	OFFICIAL CLASS	ENGINE NUMBERS	Boiler Pressure	EASTWARD				WESTWARD					EASTWARD					WESTWARD				
				Tucson-Mescal	Benson-Dragoon San Simon Steins	Mescal-Benson Dragoon-Willcox Raso-San Simon Steins-Conrad Pyra-Lordsburg	Willcox-Raso Conrad-Pyra	Lordsburg-Pyra	Pyra-Mondel Steins-San Simon Raso-2 M. E. Cochise Dragoon-Benson Mescal-Tucson	San Simon Bowie	Bowie-Raso 2 M. E. Cochise-Dragoon	Mondel-Steins Benson-Mescal	Bowie-San Carlos	San Carlos Cutter	Cutter-Pinal	Pinal-Globe	Globe-Miami	Miami-Globe	Globe-Pinal	Pinal-San Carlos	San Carlos Tanque	Tanque-Bowie
M-6 M-6	M-63 21/28 150-S......... M-63 21/28 159-SF........	1725 to 1769................ 1780 to 1803................ 1823 to 1825................	200	1950	1500	6000	2900	3250	6000	3650	2250	1500										
T-37	T-70 24/28 146-S...........	2105, 2106	175	2000	1550	6000	3000	3350	6000	3750	2300	1550	3700	2250	950	6000	1500	1050	950	6000	3150	2400
C-8 C-9, 10 C-9, 10	C-57 22/30 192-S.......... C-57 22/30 200-SF........ C-57 22/30 194-S..........	2513 to 2599................ 2698 to 2860................	210	2500	1950	8000	3750	4150	8000	4650	2900	1950	4900	3000	1310	8000	2000	1400	1310	8000	4170	3220
TW- 3	TW-50 20/26 120.............	2932 to 2945................	170	1600	1250	6000	2400	2650	6000	2950	1850	1250	3200	1950	850	7000	1300	900	850	7000	2700	2100
P-12	P-73 26/28 189-SF	3120 to 3129................	205	2600	2000	8000	3900	4350	8000	4900	3000	2000	4850	2980	1300	8000	1980	1390	1300	8000	4100	3200
Mk-2, 4 Mk-2, 4	Mk-57 23½/30 206-S .... Mk-57 23½/30 230-SF........	3200 to 3240................	210	2800	2200	8000	4250	4750	8000	5300	3250	2200										
Mk-5, 6 Mk-5, 6	Mk-63 26/28 210-S.......... Mk-63 26/28 231-SF........	3241 to 3277................	210	3150	2450	8000	4700	5250	8000	5850	3650	2450										
Mk-7, 8, 9 Mk-7, 8, 9	Mk-63 29/30 247-S, 257-SF... Mk-63 29/30 247-S, 257-SF...	3300 to 3324................	176 205	3500	2750	8000	5200	5800	8000	6500	4000	2750										
F-1	F-63 27½/32 273-S..........	3600 to 3652................	200	3700	2900	10000	5500	6100	10000	6850	4250	2900										
F-3	F-63 29½/32 297-S, 300-SF	3653 to 3667................	200	4200	3300	10000	6300	7000	10000	7800	4850	3300										
F-4, 5 F-5	F-63 29½/32 306/B-61SF..... F-63 29½/32 306/B-62-SF....	3668 to 3763, 3769 .... 3764 to 3768	200	4750	3750	10000	7100	7850	10000	8800	5450	3750										
AC-7, 8	AC-63 $\frac{24-24}{32}$ 515-SF, 532-SF...	4151 to 4204	250	7400	5500	14000	10400	11500	14000	12900	8000	5500										
Mt-1, 3, 4, 5	Mt-73 28/30 246/B-60-SF.....	4300 to 4376................	210	3800	2950	10000	5650	6300	10000	7050	4350	2950										
Mt-2	Mt-73 29/30 262-SF..........	4385 to 4390................	210	3550	2800	10000	5350	5950	10000	6700	4100	2800										
GS-4	GS-80 25½/32 267/B-118-SF....	4430 to 4449................	300	3900	3000	10000	6000	6700	10000	7500	4550	3000										
SP-1 SP-2, 3	SP-63 $\frac{25}{28-32}$ 316/B-60-SF .... SP-63 $\frac{25}{28-32}$ 317/B-61-SF....	5000 to 5048................	225	5350	4350	10000	8000	8850	10000	10000	6150	4350										
	Allowance for empty and underloaded cars	Less than 45 M's............ 45 M's to 55 M's............ More than 55 M's............		6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0	6 3 0

These ratings include the total weight of train, exclusive of engine and tender, which the different class of engines will haul in each direction between the stations shown.

ASSISTANT SUPERINTENDENT
G. A. BAYS

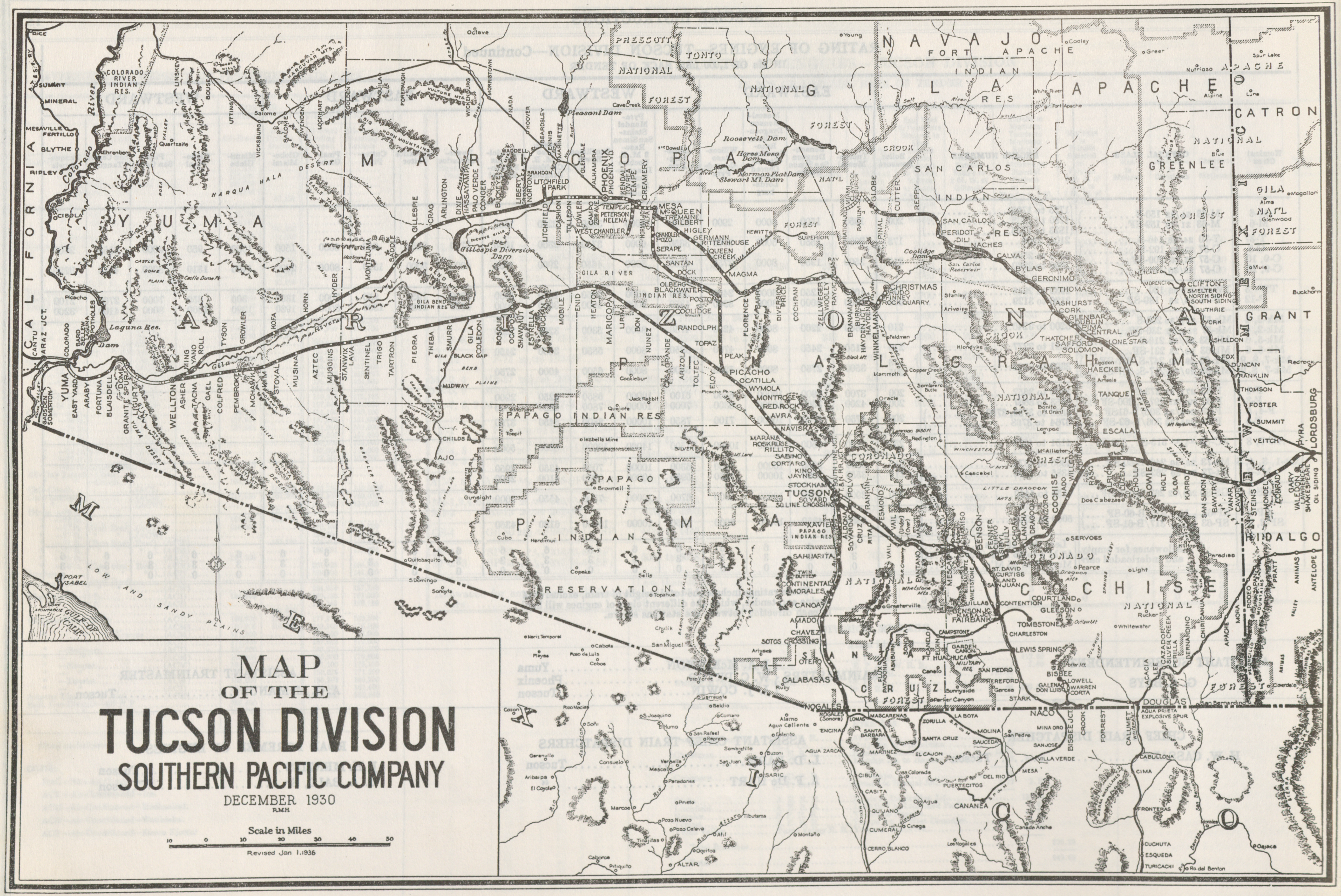
TRAINMASTERS
J. A. McKINNON....................Yuma
W. C. PRYOR ....Phoenix
J. J. COWIN........................Tucson

ASSISTANT TRAINMASTER
A. G. McMANUS....................Tucson

CHIEF TRAIN DISPATCHER
H. W. CASSADY........................Tucson

ASSISTANT CHIEF TRAIN DISPATCHERS
L. D. BARR ....Tucson
A. F. De HART .... "

ROAD FOREMEN OF ENGINES
J. H. MENZIES ....Tucson
C. A. BALL, Sr...............................Tucson


CALIFORNIA
ARIZONA
YUMA
MARICOPA
GILA
PINAL
PIMA
GRAHAM
GREENLEE
COCHISE
SANTA CRUZ
NAVAJO
APACHE
CATRON
GRANT
HIDALGO
NEW MEXICO
MEXICO
COLORADO RIVER INDIAN RES.
PAPAGO INDIAN RES
PAPAGO INDIAN RESERVATION
GILA RIVER INDIAN RES.
GILA BEND INDIAN RES.
SAN CARLOS INDIAN RES.
FORT APACHE INDIAN RES.
PRESCOTT NATIONAL FOREST
TONTO NATIONAL FOREST
CROOK NATIONAL FOREST
CORONADO NATIONAL FOREST
GILA NATIONAL FOREST
HARQUA HALA DESERT
GULF OF CALIF.
LOW AND SANDY PLAINS
Roosevelt Dam
Coolidge Dam
San Carlos Reservoir
Gillespie Diversion Dam
Laguna Res.
Pleasant Dam
Horse Mesa Dam
Mormon Flat Dam
Stewart Mt. Dam
YUMA
EAST YARD
ARABY
FORTUNA
BLAISDELL
GRANITE SPUR
LIGURTA
WELLTON
ASHER
TACNA
MOHAWK
STOVAL
AZTEC
SENTINEL
GILA BEND
PHOENIX
TEMPE
MESA
CHANDLER
COOLIDGE
FLORENCE
CASA GRANDE
PICACHO
RED ROCK
MARANA
TUCSON
VAIL
BENSON
FAIRBANK
TOMBSTONE
NOGALES
BISBEE
NACO
DOUGLAS
COCHISE
WILLCOX
BOWIE
SAN SIMON
STEINS
LORDSBURG
GLOBE
MIAMI
SAN CARLOS
CLIFTON
DUNCAN
SAFFORD
AJO
CALABASAS
AMADO
SAHUARITA
CANANEA
FRONTERAS
NACOZARI
ALTAR
Scale in Miles
10 0 10 20 30 40 50

MAP OF THE TUCSON DIVISION

SOUTHERN PACIFIC COMPANY

DECEMBER 1930

R.M.B.

Revised Jan 1, 1936